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Structural local authority collaboration in the Netherlands

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Abstract

Collaboration has been recognised and acknowledged in the public procurement sector as an opportunity to obtain better purchase conditions from the market. Against this backdrop, this thesis explores how a relatively new form of structural collaboration affects the long-term procurement performance of local authorities.

The aim of this research is to evaluate the impact of structural collaborative procurement organisations on the performance of local authorities. If it enhances procurement performance in the Netherlands, it could be an alternative to organisational restructuring, such as the merger of local authorities or entering into shared-services. In recent years, the Netherlands has seen key decentralisation operations in a number of policy areas (De Klerk, Gilsing, & Timmermans, 2010). These transformations and changes have put a spotlight on the optimisation of the current size of the local authorities in the business process with the goal of improving the performance of individual local government organisations.

Building on the excellent previous research on collaboration, this research studies the challenges and opportunities of structural collaboration for local authorities, especially in the area of procurement. A review and synthesis of a strategic and economic theories, collaborative arrangements and shared service centres identified a gap in the literature related to adding value and less uncertainty for lower cost, aimed at local authorities, which underpins the concept of structural collaboration.

This study contributes to a deeper and more meaningful understanding of the long-term and structural benefits of structural procurement collaboration for organisations. These contributions are in value items, which aid the procurement function in the organisation to the advanced level of professionalisation. This research demonstrates that structural collaboration produces positive results in the field of knowledge, professionalism, reputation, innovation, complementary resources, quality of services, information asymmetry, cost competitiveness, and economics of scale. Likewise, a point is made in

the area of cost savings through improvements in efficiency and effectiveness, in the execution of procurement projects, as well in the fields of resource sharing and capabilities, control of information, coordination and mechanism, agility and flexibility and uncertainty.

This study contributes to the fields of politics and management through supporting alternatives for possible amalgamation in municipalities in the Netherlands (Kay, 1995; Laar, 2010). Naturally, there are no perfect solutions in such complex discussions; nevertheless, this study hopes to contribute to the continuity, professionalism, and robust public organisation of the debate. Current existing collaborative (procurement) organisations can improve their collaborative organisations based on the Structural Collaborative Procurement (SCP) framework developed herein. The contribution of the final practitioner, a Chief Procurement Officer of collaborative organisations, is in terms of insight into coordination between participants and collaborative organisations, the boundary between outsourcing versus insourcing procurement activities, reducing (procurement) organisational risks, two-way collaboration, symmetry of information etc., which in turn can be used to increase the productivity of collaborative (procurement) organisations.

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Declaration

I declare that this thesis is solely my own work, and that it has not been submitted, in whole or in part, in any previous application for a degree. Except where stated otherwise by reference or acknowledgment, the work presented is entirely my own.

Date : ……..

Signature : ……..

Acknowledgments

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Abbreviations

JPG	Joint Purchase Group
LA	Local Authority
PP	Procurement Performance
RBT	Resource Based Theory
SCP	Structural Collaborative Procurement
TCT	Transaction Costs Theory

Chapter 1. Introduction

1.1 Research background

Local agreements and collaborations have been studied for some time, showing collaboration to be omnipresent among municipalities and local organisations. However, these studies have also demonstrated that collaboration on a local level is much more difficult than at the central government level, where it is obligatory (Janssen, Joha, & Weerakkody, 2007; Kaats, Klaveren van, & Opheij, 2006; Van de Laar, 2010). Collaboration is political in the sense that, because there is no formal hierarchy among the participants, decisions on the details of how implementation will proceed are made collectively (Krueger & McGuire, 2005). Governmental research conducted by the House of Commons Communities and Local Government Committee in the UK has justified the latter (House-of-Commons-Communities-and-Local-Government-Committee, 2014).

In the last decade, local authorities (LAs) in the Netherlands have been assigned a number of tasks which have been decentralised from the national government. The former elected coalition government in 2014 made this one of the priorities of municipalities and other local public organisations that are anticipating changes. These transformations and changes have shone a spotlight on the optimisation of the current process of collaboration, which has been intensified by the economic recession that the Netherlands has recently entered.

Researchers in the public procurement field have begun to examine the implementation of collaboration in different settings, so structural collaboration procurement (SCP) has become a central issue which also needs to be investigated. The term ‘structural collaboration’ describes a situation where a number of organisations collaborate on a particular function, such as procurement, by using one organisation to provide that service for them.

Since there is a stage in the strategic management process of intensive collaboration, when many stakeholders need to interact with each other, it is important to take

efficiency and effectiveness into consideration in order to create smooth execution processes (Meehan, Ludbrook, & Mason, 2016; Proulx, Hager, & Klein, 2014). Consequently, there is a growing recognition of the need for effective organisational collaboration, especially when considering the introduction of new public procurement legislation and regulation in public organisations, as well as the decentralisation of public tasks (Afonso, Schuknecht, & Tanzi, 2010; Dijkhoff, 2014; Salianji, 2017; Waverijn, Groenewegen, & de Klerk, 2017).

In Chapter 1, attention is drawn to the question of the need to make the procurement function of local government organisations more robust. Is the existing form of structural procurement cooperation (SCP) now actually a possible solution to be able to meet those new challenges?

Section 1 of this chapter briefly summarises the background, followed by section 2 which outlines the context to which the central research aim relates. Section 3 states the significance of this study and its provenance, followed in section 4 by a description of the objectives of the study. Sections 5 and 6 discuss the scope of the research and how the thesis is structured.

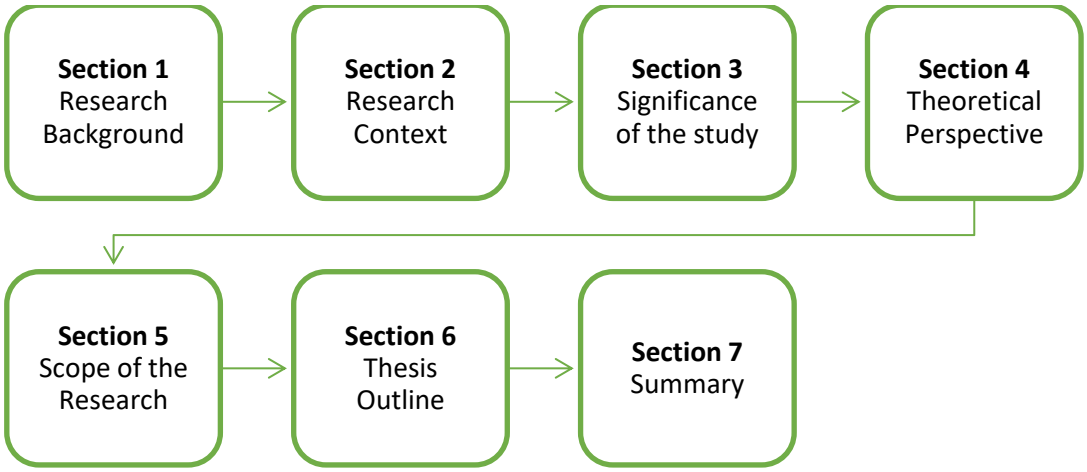


Figure 1-1 Outline of Chapter 1

1.2 Research context: situation in Europe and the Netherlands

In the Europe 2020 strategy (Barroso, 2010), the Commission emphasises that public procurement policy should ensure the most efficient use of public funds and public procurement markets should be kept open throughout the EU. Against the background

of serious budgetary problems and economic difficulties in many EU Member States, obtaining the best possible procurement results through efficient procedures is essential. In view of these challenges, an effective and efficient European procurement administration which can meet these ambitious objectives is more important than ever (Afonso et al., 2010).

In 2014 the new public procurement package, 2014/23/EU-2014/24/EU-2014/25/EU, was adopted by the European Parliament and the Council. In addition the European Parliament gave its opinion and vision to the European Commission about what should be done in the areas relating to public-public and public-private cooperation, awarding contracts below the threshold, services concessions, area developments, SMEs, and social and green procurement. Another addition is that criteria such as innovation, environmental and social aspects have to be taken into account and the administrative burden should be reduced (European-Parliament-and-the-council-of-the-European-Union, 2014).

In the Netherlands, a national public procurement act (NPPA) came into force in 2013. The NPPA 2012 implements the European Directives on Procurement and also includes national rules under the European thresholds. The NPPA 2012, which was revised in 2016, implements the European Directives as closely as possible to the Dutch situation (Ministry-of-Economic-Affairs, 2016), but goes further than was required under European regulations at that time. This is because of the objectives of the National Public Procurement Act, which were ahead of the new public procurement package. Many LAs already had an individual procurement policy for their organisation.

In order to help LAs apply these policies, the Dutch Ministry of Economic Affairs has adopted policy measures. The measures must supplement the revised National Procurement Act 2012, give more direction to tender practice, and support and encourage professionalisation. These policy measures, also referred to as flanking policy, include the regulations and guidelines as:

- Guidelines for Supplies and Services (which were repealed in 2016);
- Procurement Regulations for Working 2016;
- Proportionality guideline;

- Commission of tender experts / Complaints Desk;
- System of verification / prequalification / tender passport;
- Vereniging van Nederlandse Gemeenten (VNG) model procurement and procurement policy.

After these regulations became formally lawful, LAs in the Netherlands were struggling with implementing and applying both the national act and the flanking policy (Volker & Meel, 2012). They experienced more and more pressure from stakeholders such as city-council members, entrepreneurs and internal audit commissions, who were all asking for a robust procurement function. The pressure was amplified by the large amounts of money involved in the local government sector, and thus these local authorities' risk in procurement.

Table 1-1 displays disaggregated public spending in 2016, which shows the LA share of public sector procurement spend and the associated financial risks.

Table 1-1 Procurement Spend Public Sector (2016)

Type public authority	Total in billion euro
Central government	22.3
Local authorities	41.5
Social funding	0.9
Hospitals etc.	8.6
Total	**73.3**

Many public organisations use a form of procurement collaboration to execute their increasingly complex procurement operations. Besides reducing costs directly, the need for local authority organisations to get access to resources will also be examined, which will have an indirect effect on costs. Therefore, this thesis addresses collaboration between LAs and the optimisation of organisational parameters, with particular reference to local government organisations in the Netherlands.

LAs in the Netherlands, which cooperate with each other on a *structural* basis in the area of procurement are viewed in Figure 1-2. There are a range of different ways that organisations can collaborate with each other. This research focuses particularly on a aspect that has to date been under-researched, the phenomenon of SCP.

Although not mandated by the national government, these organisations are essentially collaborations between municipalities, local government organisations etc. All the partnerships that are included collaborate in various procurement domains such as social care, student transport, security, works and IT.

The concept of an SCP can be characterised as an organisational collaborative model, which ensures that local authorities keep the supporting procurement processes effective and deliver the agreed quality at acceptable and reasonable costs. An SCP is a directive for the execution and handling of operational tasks such as procurement processes, contract management, procurement legal support, compliance EU procurement procedure, procurement expertise and Joint Purchase Groups (JPGs). An SCP is an entity within a region and is charged with providing services to the various LAs. This often involves providing specialised services to various departments based on a service level agreement.

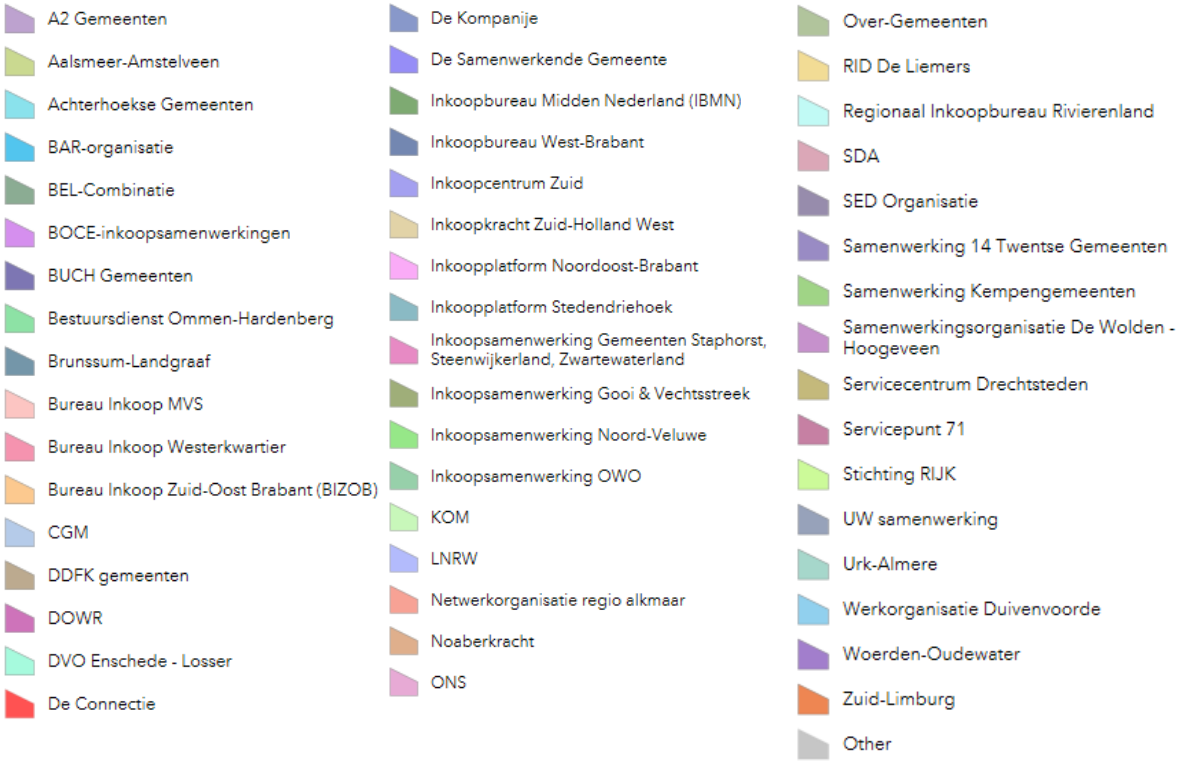
In the last four years, structural collaborative procurement in local government in the Netherlands has increased significantly. The table below shows that for approximately 38% of the Netherlands' inhabitants, their local authority services have been procured through structural collaborative public procurement organisations. Also, 64% of local authority organisations in the Netherlands have a structural collaborative organisation for procurement (Table 1-2). Structural organisations for collaborative procurement have increased by a factor of approximately 2.5 (Ministry-of-Economic-Affairs, 2015).

Table 1-2 Structural Collaboration in Local Authorities 2015

	Netherlands	Public procurement organisations	Descriptive / Mutation	Sparklines
Inhabitants	16.920.000	6.500.000	38.4%	
Local government organisations	393	252	64.1%	
Structural collaboration	Year 2011 Year 2015	18 46	255.6%	

Most of these organisations are copies or a hybrid model of the Bizob procurement collaboration, which was one of the first SCP organisation in the Southeast of Netherlands. These are shown in Figure 1-2, as well as collaboration initiatives whereby procurement is integrated in a shared service centre for finance, healthcare, justice, taxation, human resource management and information technology. Besides joint procurement organisations, there are several forms of less structured strategic and ad hoc collaboration for procurement, which have been initiated by procurement functions and instigated by product experts supported by public branch organisations.

Figure 1-2 Overview of Structural Procurement Collaborations Organisations in the Netherlands 2018



1.3 Significance of the study

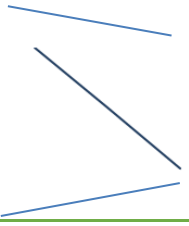
In recent decades, the Netherlands has seen a major decentralisation of operations taking place in a number of policy areas (De Klerk et al., 2010). The introduction of the Social Support Act (SSA) in 2007 marked a new stage in this development. The SSA relocates the responsibility for providing social support to the municipal level. The principal aim of this move has been to facilitate social participation and self-help or independent functioning of citizens.

In the Netherlands, LAs are being increasingly assigned activities that have been decentralised from the national government by this change, for example there has been a transition of social care. What kind of typology can be used to execute these tasks or, more desirably, add value to them? At the same time, local government budgets have been cut by at least 10-25%, thus there is less money available to provide quality and value for citizens (Dijkhoff, 2014). The scope of this research topic concerns the efficiency (how to organise) as well as the efficacy (what is organised) of the services that public organisations have to provide to their citizens. Public organisations are increasingly outsourcing activities, making procurement the second highest expenditure after costs of staff. All decentralised groups of municipalities and their fragmented

allied organisations need to find the best fit in relation to these challenges. This is something in which a typology or framework may help.

A topical activity that has been decentralised to the municipalities is the social domain. Municipalities have been responsible for child welfare, employment and income and long-term care for the sick and elderly since 2015. These welfare services are legally secured through the Youth law, Participatiewet and Social Support Act (WMO). The municipalities and the provinces, in the current situation, execute some of these tasks, but the municipalities now have to take on all of these duties from the provinces too. The transformation of these tasks and the associated budgets requires a clear division of responsibilities and powers, and adequate (information) packages, which must be organised by the municipalities (Dijkhoff, 2014; Waverijn et al., 2017). Spending will therefore increase and move from the national government level to local organisations. Research from the University of Twente (Telgen, 2013) provides an overview of the figures and facts, shown in Table 1-3 below.

Table 1-3 Changes in Procurement Spending on Commodities

Sector	Ca. 1990	Current	After 2015	Sparklines
Facility	25%	20%	15%	
Infrastructure works and non residential building	50%	40%	30%	
Social domain	25%	40%	55%	

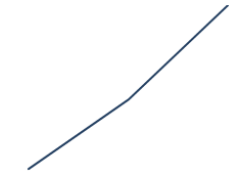
This research can emphasise the importance of clearly defining and positioning studied forms, as different forms imply different research models and have different advantages, disadvantages, and critical success factors. The typology or framework can serve as a guideline for the responsible local authority or (decentralised) organisations, when a suitable organisational form needs to be chosen for collaboration. The problem that this study will address is how to prevent local authority organisations from executing tasks with waste of resources and limited realisation of the business objectives. Hence, procurement performance (PP) will be assessed and measured on the central terms of efficiency and effectiveness. Some research has already been conducted on collaboration and efficiency for central government, but not at the level of province or

region and not taking into consideration the new decentralised activities of the central government. That is why carrying out the present research is justified.

Initially, research by Telgen Telgen (2013) shows that total public influenced spending will exceed approximately c.€ 15 billion in the coming years. Converted per capita, this is about € 1,000 per inhabitant each year, which takes total procurement spending at the local government level to c.€ 2,000 per inhabitant per year, assuming an autonomous spend of c.€ 1,000 of the local government on facility and infrastructure works and non-residential building. Public spending has been expressed as the financial amount where the LAs spend budgets to realise output, public services for their citizens are those which are influenced by the procurement function.

The financial impact of the extension and expansion of these decentralised activities is illustrated in Table 1-4. These are the estimated consolidated amounts for the 21 municipalities in the Southeast of Brabant, which gives an indication of the financial value of public procurement in this region.

Table 1-4 Overview of Current and Estimated Spending of Municipalities in Southeast-Brabant

Sector	Region Southeast Brabant Ca. 1990	Region Southeast Brabant Current	Region Southeast Brabant After 2015	Sparklines
Facility	€ 93.536.875	€ 149.659.000	€ 224.488.500	
Infrastructure works and non residential building	€ 187.073.750	€ 299.318.000	€ 448.977.000	
Social domain	€ 187.073.750	€ 299.318.000	€ 823.124.500	
Total	€ 467.684.375	€ 748.295.000	€ 1.496.590.000	

Extending and expanding the tasks of public services will lead to the allocation and use of economic resources, primarily to secure knowledge of and quality in current and new products. Alongside changes in internal relations, the break up of departments and the balance of political power, there are also likely to be allocation issues. Most of those movements depend on internal organisations and political choices, where politicians are

assumed to steer and managers to row. On the other hand, it is a fact that local authorities budgets will face cuts. Therefore, effective and efficient collaboration between these organisations can be a stepping-stone towards realising this target.

Besides the above-mentioned current developments, local authorities are struggling with the execution of their corporate procurement function (Sporrong & Kadefors, 2014), as mentioned in paragraph 1.2. In the last five years legislation and regulation have been extended from the European court and political and social themes have been secured in legislation and national guidelines (Table 1-5). These expansions have a direct effect on the operation of the procurement function of LAs. In the management area of local government, these political, social and legal developments have been established without paying attention to the current stage of level and structure of the current procurement function of the LAs (Grandia, 2016). Dale-Clough (2015) showed in her frame-work for upgrading and extending the procurement function at the LAs that it is possible to ensure the implementation of innovation in the procurement activity and a clear emphatic relationship between local politics and procurement activities in their procurement organisations. She found in her study that the implementation of public procurement innovation stays stuck because of the failure to learn from occurrences, which could encourage new activities or behaviours that can be adopted in the procurement environment and the supplier environment.

Therefore, the implementation of these National and European (procurement) legislation and sustainability policies (theme) at the LAs demands clear and structured procurement processes. Consequently, several LAs in the Netherlands have joined or started an SCP, to concentrate the core procurement activities. It is interesting to explore whether this adds to the PP of the LAs.

Table 1-5 Development of National and European Procurement Regulations

Theme	Objectives	Secured	Measured	Accountability
European legislation (European-Parlament-and-the-council-of-the-European-Union, 2014; Ministry-of-Economic-Affairs, 2012, 2016)	Non-discriminatory Objective Transparency Proportionality	Legislation	External accountant	Council
National legislation (Ministry-of-Economic-Affairs, 2016)	EU objectives Dividing contracts into lots to encourage access for SMEs	Legislation	External accountant	Council
Sustainability guidelines (Environment, 2012; Ministry-of-Infra-Structural-and-Environment, 2016; VNG Werkgroep gemeenten Amsterdam, 2018)	Innovation to encourage Environment and social return	Policy	Internal accountant	Council

This study examines and analyses intensive collaboration (structural collaboration) between local government organisations to identify if efficiency and uniformity can reduce costs, even if individual influence or identity are compromised (Niehaves & Krause, 2010). Despite the possibility of individual differences, there is one common goal that LAs share: maximisation of the value of taxpayer money. The academic rationale for this topic is to discover if the LAs in the Netherlands can make savings of time and money by creating more efficiency and effectiveness in collaboration between local authority organisations.

1.4 Theoretical perspective

This topic has been explored by a range of studies previously, however they have typically focused on collaboration between individual organisations in the private sector as well as in the public sector. In addition, there is a significant amount of collaboration between both the private sector and the public sector, particularly in supplier and buyer relationships.

Overall, they have often used theories such as strategic and socio-organisational theories to shed light on this topic, although a minority of studies are based on economic and strategic theories (Richter & Brühl, 2017).

Occasionally, collaboration is aimed at gaining more expertise, which may not be available in the organisation. There may be an emphasis on time-saving for some organisations in terms of effectiveness, or cost control for efficiency (Kaats et al., 2006; Murray, Rentell, & Geere, 2008; Nollet, Calvi, Audet, & Côté, 2008; Urquhart, 2002; Van de Laar, 2010; Vestrum & Ramussen, 2013). Hence the interpretations in the literature can be primarily filtered through two lenses of theories, namely the RBT (Teece, Pisano, & Shuen, 1997), and TCT (Coase, 1937). These theories link the phenomena of this research because of cost control, and the multiplication of resources – both capabilities and professionalisation in the procurement function.

In this study, cooperation between buyers and suppliers, or vertical collaboration (Allal-Chérif & Maira, 2011; Sumo, Van der Valk, & Van Weele, 2012), will not be examined. Game theory (Bierman, Bonini, & Hausman, 1991; Smith, 1982) will not be applied as this study will consider the most economic models for horizontal collaboration (Bakker, Walker, & Harland, 2006; Schotanus & Telgen, 2007) in local governments in the Netherlands. This research therefore focuses on public organisations that are buying infrastructure / building works, goods and services rather than their relationships with their suppliers (Allal-Chérif & Maira, 2011).

In principle, there are no conflicts of interest between the LAs in the Netherlands and LAs have full transparency of information to the society, so probability decision calculations are not relevant. From that view the research will be focussed on the RBT and TCT, these theories can be used to explore the models that typically apply to remove, reshuffle, renew or enlarge the extent of all forms of horizontal collaboration in several services used and provided by local authority organisations in the Netherlands.

The purpose of this research is to highlight the collaboration challenges that LA organisations in Netherlands are faced with when undertaking new decentralised activities as an extension of their current activities, while aiming to secure maximum value for tax-payers' money. Many LAs are now operating a form of horizontal

collaboration (SCP) for the procurement function, but to date this phenomenon is underresearched.

This leads to the following research aim:

What impact does SCP have on the effectiveness and efficiency of the internal procurement function in local authorities in the Netherlands?

'Effectiveness' here is related to the goals and the objectives of the procurement function of the LAs, and 'efficiency' to the resources which are required in order to meet the objectives of the LAs.

To meet this aim, the research will review literature from three areas: public procurement, local authority and collaboration.

As demonstrated by earlier research on the province of North Brabant, despite ongoing interest accelerated by pressure from the national government, there has been little research conducted on the procurement functions of LAs in the Netherlands. As shown in the previous section, collaboration in this area can be based on several choices and possibilities, especially in terms of the autonomy and operations of the organisations involved. Therefore, first, *what* is the procurement function phenomenon being studied?

Without rationally investing and analysing their own resources, organisations cannot collaborate effectively. Existing LAs have consciously or unconsciously organised their procurement functions for some time, in ways linked to their organisational aim and operations. On the other hand, new organisations will be established or existing organisational tasks will be extended. Therefore, this study will examine the potential efficiency savings and effectiveness that fragmented procurement organisations could achieve in a particular region through structural collaboration.
Hence, in order to focus and assess, this main research aim will be guided by three research objectives: value, uncertainty and cost reduction.

What are value items for LAs in the public procurement function, which can be affected by structural collaboration? How can these values increase professionalism in the procurement function to apply the renewed EU and national regulation expertly? Does structural cooperation influence the desired availability of innovative products and services? Renewed European and National regulations have affected uncertainty in the procurement processes of LAs in the Netherlands (Volker & Meel, 2012). Due to structural collaboration, improvements have affected the uncertainty of the procurement function from internal and external aspects. The extended activities which have been decentralised with lower budgets (Dijkhoff, 2014) have forced LAs to adopt efficiency measurements in the internal procurement processes and to take a critical look at existing public horizontal conglomerates (Allers & Van Ommeren, 2016).

These three areas underpin and justify the research context and research problem, mentioned in sections 1.2 and 1.3. The provenances of the three issues and objectives are considered in the Table 1-6 below.

Table 1-6 Provenance of Research Objectives

Phenomena	Empirical problem Research area	Reference
Renewed EU and National procurement act and regulations	*Uncertainty* Impact of SCP on uncertainty in the procurement function of LAs	(European-Parlament-and-the-council-of-the-European-Union, 2014; Ministry-of-Economic-Affairs, 2012, 2016)
Renewed EU and National regulations for sustainability, green procurement and access of SME to public tenders	*Value* Impact of SCP on value in the internal business processes of the procurement function of the LAs	(Environment, 2012; Ministry-of-Infra-Structural-and-Environment, 2016; VNG Werkgroep gemeenten Amsterdam, 2018)
Decentralisation of public services to LAs with lower budgets	*Cost-reduction* Impact of SCP on cost-reduction in the procurement function of the LAs	(Dijkhoff, 2014; Waverijn et al., 2017)

This lead to three concrete objectives for this research:

1. To identify the values that LAs encounter as a result of structural collaborative procurement;
2. To explore the effect of structural collaborative procurement on the uncertainty that LAs experience in the procurement function;
3. To examine the cost reduction for the procurement function of the LAs that occurs as a result of structural collaboration.

The objectives of this study are thus, first to identify the *values* involved in intensive collaborating for the LAs in the procurement function, and their effects on the output. The study aims to ascertain the collaborative values and how they affect the PP of the LAs, examining this in practice through a qualitative and quantitative study. For example, values such as knowledge and professionalism have been recognised to contribute to realising the strategic goals of the LAs such as sustainability and being climate neutral. Also, the study aims to examine the effects on the *certainty* or the vulnerability of the business and procurement activities of the LAs and to evaluate how these relate to the new renewed EU and National procurement act and regulations.

The economic *cost-benefits*, caused by collaborative approaches as purchase groups and E-procurement systems, have been examined in practice through a qualitative study, to evaluate if cost savings have been realised for the LAs.

To identify the nature of efficiency and effectiveness in procurement, the procurement function will be divided into various parts, which will be measured using criteria from the economic theories. To assess the parts of the procurement function, first the components of the procurement function need to be defined. The procurement function will be measured using two models, which assume that efficiency and effectiveness are not operating independently of each other. PP displays a combination of efficiency and effectiveness. Kumar and Gulati (2010) showed that there was a strong correlation between output, performance and effectiveness. They also demonstrated that high efficiency is not a guarantee of extreme effectiveness. Moreover, strong efficiency advance can lead to less effectiveness in the primary output of procurement (Úbeda, Alsua, & Carrasco, 2015; Waverijn et al., 2017). Table 1-7 provides an initial overview of some key items which are examined.

This study will assess whether more *efficiency* is achieved through collaboration between fragmented homogeneous organisations in the Netherlands. Efficiency in the organisation of the execution of procurement processes, operating E-procurement systems, and procurement capacity will be evaluated. The model that will be applied to measure this efficiency is that of Van Weele (2006), shown in Figure 1-3.

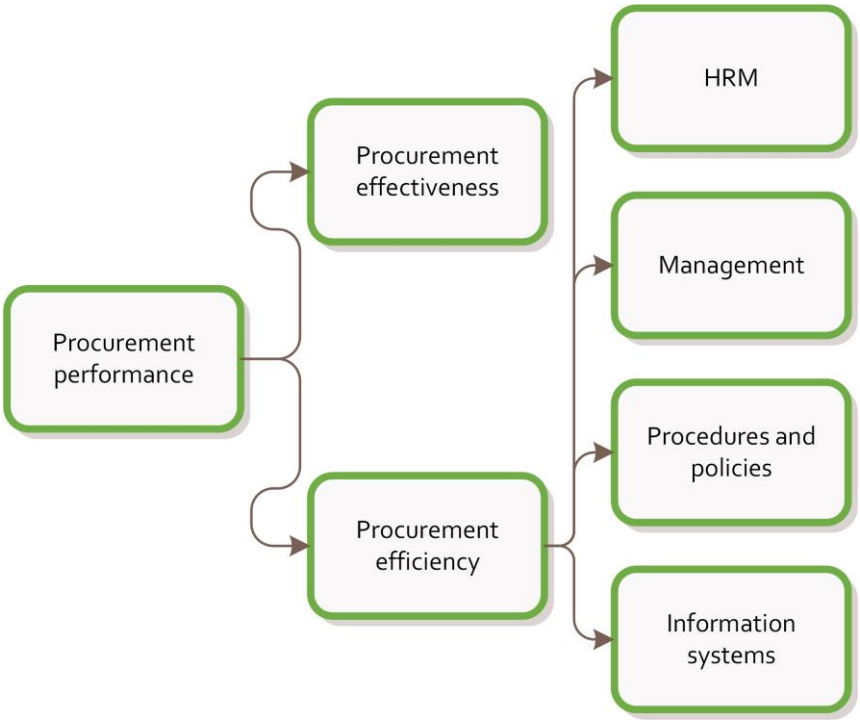


Figure 1-3 Key Areas of Performance Measurement (Van Weele, 2006)

To measure the effectiveness of collaboration, the components of the procurement process model will be used. To examine the output of conjunction with a quantitative study, values such as cycle time of procedures, applying innovation, learning, and sharing have been evaluated.

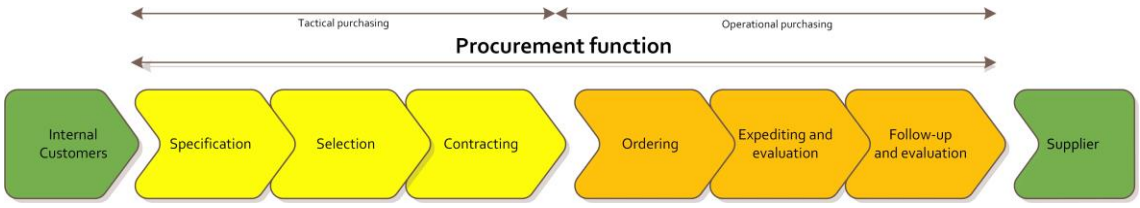


Figure 1-4 Procurement Process, adapted from Van Weele, 2006 and Lysons and Farrington, 2006

Figure 1-3 and Figure 1-4 provide an overview of all of the components of the procurement function.

This thesis will examine if structural collaboration can support LA organisations to realise their predetermined goals at a lower cost. It should also contribute to product, services and process innovation and reduce local government supply risk (Murray et al., 2008). This study will also research whether collaboration adds value to the components of the procurement function. Finally, performance indicators are needed to verify what the results of procurement policies are and how they add value to LAs. To examine this in practice, mixed studies have been conducted, initially with qualitative research.

Table 1-7 A Global Description of What Can be Measured During the Thesis

Procurement Performance	Dimension	Character	Theoretical	Key Performance Indicators
Procurement Effectiveness	Pre-stage and sourcing stage	Performance to cycle time of procurement projects	Ordinary resources & Core competence	*Cycle ti*me required to achieve a desired output; the more efficient a procurement expert is, the less it will cost; These outputs can be split up in the structural procurement collaboration into: Individual procurement projects Collaborative procurement
Procurement Effectiveness	Pre stage and sourcing stage	Performance of cost of execution of procurement project	Ordinary resources & Transaction costs	*Cost* of executing procurement project. These outputs can be split in: - collaborative procurement - individual procurement projects
Procurement Effectiveness	Sourcing stage	Performance of quality of execution of procurement project	Ordinary resource & Core competence	*SMEs* contracted *Sustainability* contracted: - social aspects contracted - green aspects contracted *Penalties* resulting from legal complains.
Procurement Effectiveness	Contract management stage	Performance of supplier phase of procurement project	Junk resources	Administrative lead time Lead time delivery suppliers Control of improvements
Procurement Efficiency	Procurement procedures and policies	Acting and adapting strategic vision documents	Strategic resources	Formally adopted Uniform policy and procedures and terms
Procurement Efficiency	Information systems	Relates to the efforts made to improve the information systems for daily professional procurement work.	Resource dependence	Availability of sourcing system, project system and contract management system
Procurement Efficiency	Management	It includes the quality and availability of the procurement strategies, action plans and accounting	Strategic resources	Level of professionalism
Procurement Efficiency	HRM	Education, level, motivation and development of procurement specialist	Ordinary resource	Level of professionalism of staff.

1.5 Scope of the research

This study will investigate *structural collaborative arrangements for public procurement in the local authority sector in the Netherlands,* viewed in Figure 1-2. The research will start by using qualitative methods to explore the Southeast region of the province North-Brabant, in the Netherlands, which, besides being one of the first, is also the largest collaborative organisation for public procurement in the country, followed up with exploration in the Netherlands as a whole using quantitative methods. Figure 1-5 shows a global landscape of this region that initially can be measured in this study to examine the opportunity for obtaining better performance between fragmented LAs by SCP.

Table 1-8 and Table 1-9 show the local procurement organisations that are the subject of the initial qualitative study. Principally, local governmental organisations in this region will be studied where the municipalities are economically – financially, operationally and legally – responsible. As said before, the study will be conducted firstly following a qualitative approach for the Southeast region of the province of North-Brabant, with quantitative study of the other SCPs in the Netherlands. In Figure 1-5, the initial local organisations that will be the subject of this (qualitative) study can be seen.

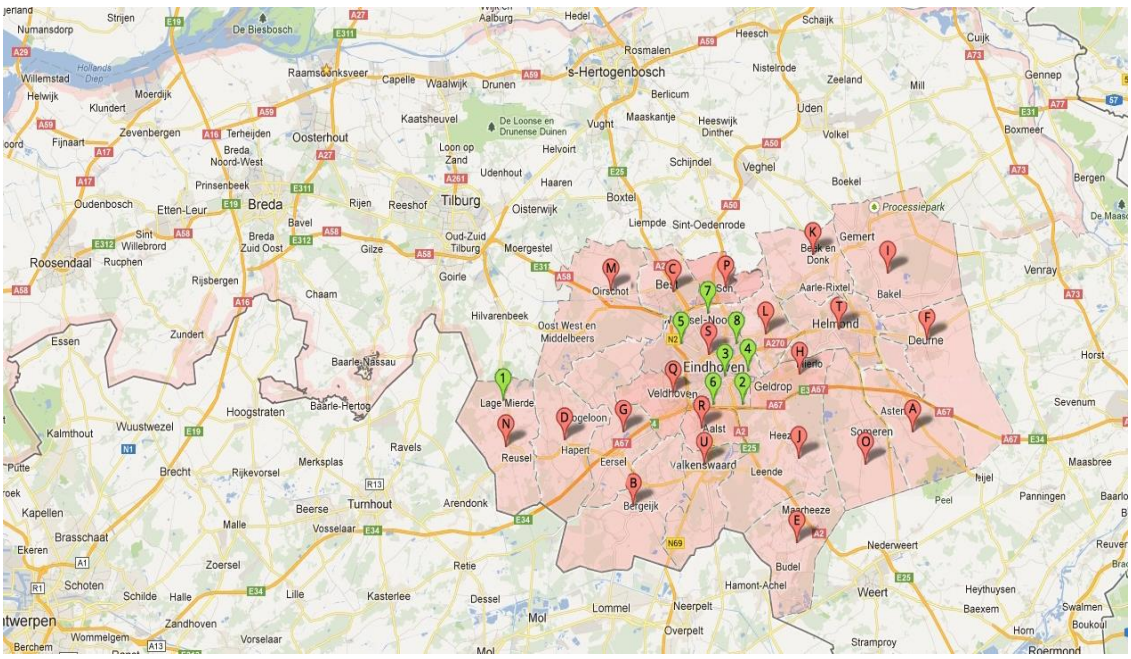


Figure 1-5 Overview of Collaborations in the Southeast of the Netherlands (from Google Maps)

Table 1-8 Local authorities from Figure 1-5

Red:	Local Authority	Inhabitants (2015)
A	Asten	16.428
B	Bergeijk	18.238
C	Best	28.578
D	Bladel	19.805
E	Cranendonck	20.411
F	Deurne	31.670
G	Eersel	18.143
H	Geldrop-Mierlo	38.821
I	Gemert-Bakel	29.330
J	Heeze-Leende	15.356
K	Laarbeek	21.815
L	Nuenen	22.590
M	Oirschot	17.978
N	Reusel-de Mierden	12.707
O	Someren	18.667
P	Son & Breugel	16.206
Q	Veldhoven	44.179
R	Waalre	16.694
S	Eindhoven	221.101
T	Helmond	89.208
U	Valkenswaard	30.370
	Total:	748.295

Table 1-9 Public organisations from Figure 1-5

Green:	Public organisation	Description
1	GR de Kempen	4 Shared Service Organisations
2	GGD	Public Health Organisation
3	Historisch Archief	Regional Historical Archive
4	ODZOB	Environment Organisation
5	SW	Sheltered Workshops (Employment Shelves)
6	SRE	Collaboration Region Eindhoven
7	VRZOB	Public Safety and Secure Organisation
8	VVV	Regional Centre for Tourism

The results of this research can be very interesting for other regions or procurement collaborations in the Netherlands, as other regions or public branches in the Netherlands are facing the same problems. The study will also probably be of interest to other local authorities within the European borders, where procurement is fragmented due to a wish to uphold their individual autonomy.

1.6 Thesis outline

Ensuing the present introductory chapter, the next chapter starts with a critical description of the most commonly used forms of collaboration alongside a critical analysis of the forms reviewed in the literature and the linked paradigms of effectiveness and efficiency. Subsequently, selected theories are discussed, namely the Resource Based Theory (RBT), and Transaction Costs Theory (TCT), for explaining the impact of SCP on the PP of LAs. The literature in this chapter provides the focus and detail to formulate the three research objectives.

Chapter Three contains the methodological justification for the research. First of all, attention is paid to the methodological design within business and economics research. Then the possibilities and limitations of the research are discussed. Finally, the design and layout of the research will be worked out and the chapter ends in the formulation of three hypotheses, which will answer the aim and objectives of the research.

Chapter Four offers an overview of the profile of the survey participants and presents the analysis of responses to the interviews, followed up by the underlying data and the survey questions, which are based upon the previously collected qualitative data. It also examines the reliability and the validity of the data, followed up by analyses in order to explore the main quantitative findings of the research. Regression analysis of the data is performed to explore direct effects between different variables and the directional hypotheses.

Chapter Five consists of merged analysis of the qualitative data in order to explain identified and unidentified relationships that have been presented by the main quantitative data analysis and to generalise findings. The integration of the qualitative and quantitative data occurs through narrative, and for the final generalisations the quantitative data have been reported in the final section.

Chapter Six represents the concluding chapter of the study. It presents an overall accomplishment of the research results as well as summarising the contributions and practical implications of the study. The chapter concludes by defining the limitations of the present study and offering directions for future research.

1.7 Summary

In this first chapter, an overview has been provided of the shift in the Dutch landscape in the area of public procurement by LAs, outlining traditional and procedure-guided procurement organisations as a contemporary fragmented issue. The central developments and challenges, changing of central government tasks and procurement themes to LAs have been identified. Together, these issues, reinforced by social and political debates, have produced a demand for LAs to move to professional business modes of organisation, 'voluntarily' but with hints from national policymakers about merging or amalgamations. In several regions, LAs have voluntarily started to engage in structurally collaborative business procurement, with the objectives of saving costs, adding more value and being less vulnerable, and this approach has offered an alternative to merging or amalgamation. The effect of SCP in bringing more efficiency and effectiveness was noted and the contribution of SCP for LAs was identified as an empirical gap in the existing literature. This research will test if this SCP concept has an impact on the PP of these LAs in the Netherlands and if SCP is an efficient method. Based on this foundation, the next chapter will review the current academic literature in the field of public collaborative procurement and will explore the theoretical foundation for the research design.

Chapter 2. Collaborative Public Procurement in Theoretical Perspective: An Introduction

2.1 Introduction

This chapter will demonstrate that this research is fully aware of the present state of affairs within this field – what the developments in horizontal collaboration in public procurement are, and the controversies and forward thinking in the work of others. This process will be structured as followed in Figure 2-1. Section 1 describes the method for conducting the literature review, followed by sections 2, 3 and 4, which clarify the role of procurement in the public sector in the Netherlands, describe the association of the paradigm, review the previous literature landscape of collaboration in public procurement, illustrate the gap related to the central aim and justify the research objectives. Section 5 connects the theories to the research objectives and section 6 explains the integrated conceptual model.

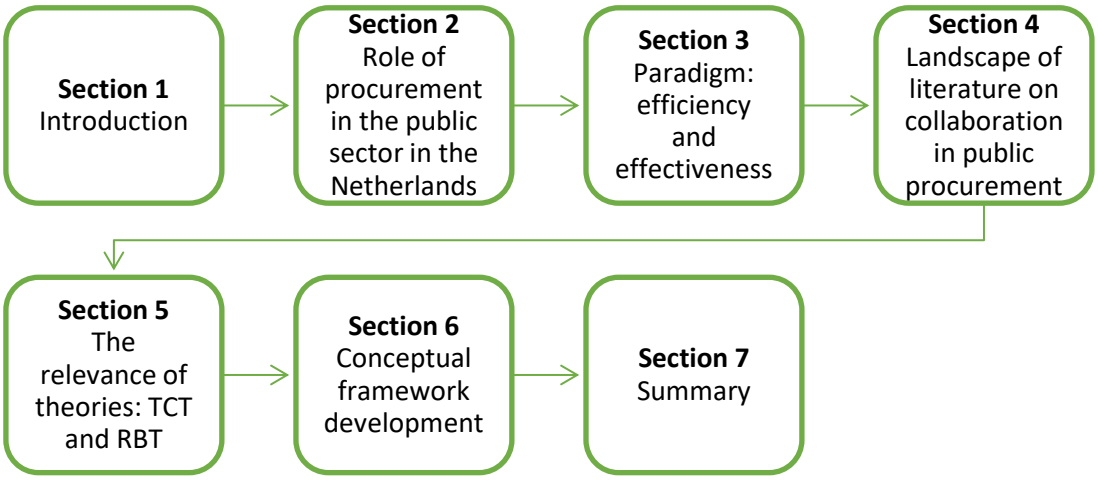


Figure 2-1 Outline of Chapter 2

As mentioned in Chapter 1, LAs and their agencies are using SCP for their procurement demands. Other regions have copied or made hybrid versions of this model, supported by the national government. These local authorities have totally or partly 'outsourced' their procurement function to collaboration efforts. While collaborative procurement,

regional or national, does not involve the transfer of assets, there is some delegation of activities, or re-arrangement of activities which involve some changes to the way local government services are organised, the type of competencies involved, the knowledge required, and relationships with suppliers.

Previous studies provide a synopsis of horizontal collaborative procurement, structurally, JPG, voluntary, and involuntarily. Most of the literature within the past 20 years has focused on purchasing groups, organisational context and shared service centres. Besides, regularly of studies about SSC are conducted through the lens of socio organisational theories (Richter & Brühl, 2017).

The literature has acknowledged that there remain some major shortcomings in current academic discussion: insufficient research on implications of structural collaborative public procurement as an alternative for the existing techniques, as amalgamation or ad hoc cooperations, for procurement synergies. A review of the whole field of collaboration would be a formidable task. The subject has attracted scholarly interest for many years, especially when considering sociology also.

This section provides a justification for the research topic in this study: increasing the potential effectiveness and efficiency of fragmented local procurement organisations in an existing formation. The research aspired to inquire if SCP organisations contribute to the procurement performance of LAs in the Netherlands.

The aim of the review is to critically appraise the range of research being conducted in relation to (horizontal) collaboration, public sector and procurement. For the review of the literature related to these themes, journal articles were sourced from databases such as Science Direct, Emerald and Business Resource. A mind map has been executed which is in Appendix II to organise the various elements and dimensions of the theories around the central theme of collaborative procurement.

The search was undertaken by using the following keywords: (collaborative) procurement performance, effectiveness, efficiency, shared service centre (SSC), joint purchase group, value, outsourcing, transaction costs, dependency, agency, procurement costs, control information, and uncertainty.

Control over quality was achieved by limiting the search to mainly peer-reviewed publications and official governmental documents. With this additional restriction, the number of resources found was reduced to 320. Full bibliographic details of the articles selected for analysis are shown in the references section. In this section, some of the earlier contributions in journals in the period 1925 to 2018 concerning these theories and collaboration are explored. Analysis of previous publications will show to what extent the need for sufficient structural collaboration has been addressed in recent literature in the areas of (public) management, collaboration, shared services, business capabilities, resource sharing, cost reduction, control of information, flexibility, coordination mechanism and uncertainty in the procurement function. The publications in the literature are examined as per the criteria mentioned below for Analysing Previous Research (Jesson, Matheson, & Lacey, 2013, pp. 46-57).

1. Which characteristics of the theory contribute to the discussion of improvements of efficiency and effectiveness by structural collaboration?
2. Which theoretical lens was applied?
3. What is the topic of the research and in which environment has it been conducted?
4. What is the research question or purpose of the writing?
5. What is the level of analysis?
6. To what strategy dimension does the writing contribute?
7. What research methodology was pursued?
8. Are there unanswered questions (gap)?
9. Are there any controversies or inconsistencies in findings?
10. Is it new or building on existing, older ideas?

Besides the traditional review of literature, the exploration started with a tabulation of a systematic review of the literature of collaboration in the (public) procurement sector. This has been included in Appendix I.

2.2 Role of Procurement in the Public Sector in the Netherlands

Public procurement is referred to as: “the process by which public authorities, such as government departments or local authorities, purchase work, goods or services from companies” (European-Commission, 2017); “the procurement by governments and

state-owned enterprises of goods, services and works [which] represents a significant amount of government expenditure" (OECD, 2015); or "the acquisition, whether under formal contract or not, of works, supplies and services by public bodies" (EPA, 2017).

2.2.1 Strategic procurement

Within the public sector, outsourcing and related contracting are increasingly taking place. The government is becoming increasingly dependent on contractors, service providers and suppliers for its business operations. Thus, as described in Chapter 1, within an increasingly complex regulatory framework, government funds are expended on increasingly complex projects. As a result, the role of the public procurement function has developed into a main core discipline within government policy and government finances. This generates procurement activities that are of vital importance for the survival of the organisation (European-Commission, 2017; OECD, 2015). That is why it is a combination of specific activities that determine whether procurement can achieve its goals and challenge the procurement function to contribute performances of suppliers directly to the success of the output, of the public organisation to the citizens, 'best value for taxpayer's money'.

The strategic business objectives for local government can be summarised as applying new regulations, development of the environment, and social measures within the financial budgets in an effective and efficient organisation (Patrucco, Walker, Luzzini, & Ronchi, 2018). The procurement strategy of the LAs is focussed on which strategic measures are needed for the organisation to use the opportunities in the procurement market optimally to realise these objectives (Van Weele, 2006). The primary challenge for the LAs is to transform the procurement function from a legal procedure to a value-added, non-vulnerable procurement function. The study by Patrucco et al. (2018) established a definition of the value of the procurement function for a public organisation and compared this with the procurement spend-rate per citizen. Patrucco found that there was a low impact of the procurement function on the LAs, on a decentralised level which indicated no formal procurement instruments and no linked procurement strategy; the procurement department mainly operated reactively. The procurement department was primarily focused on legal accountability in the procurement procedure. Interesting for this research is the 'value' of SCP to the LAs, and how this hybrid form of centralisation-decentralisation performs.

2.2.2 Procurement process

What can be called 'strategic procurement' covers the entire procurement process and concerns the translation of the local council policy into procurement principles and procedures, procurement policy, procurement objectives and organisation of the procurement organisation. 'Tactical purchasing' is about specifying, selecting suppliers and contracting. 'Operational procurement' is mainly about the administrative process (ordering, monitoring, and aftercare) (Lysons & Farrington, 2006).

An important part of the procurement function is the procurement process (from the internal customer to the supplier, as shown in Figure 2-2).

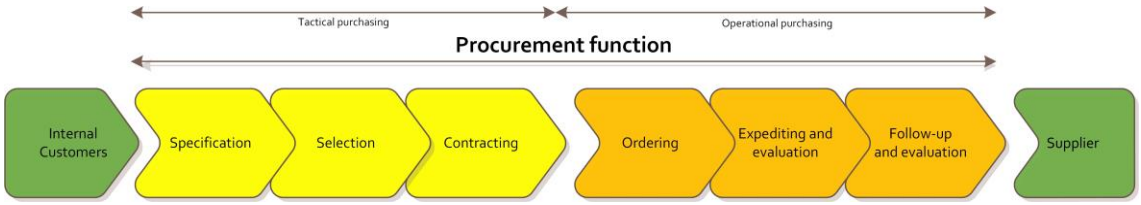


Figure 2-2 Procurement Process, adapted from van Weele, 2006 and Lysons and Farrington, 2006

This process consists of a tactical phase and an operational procurement phase. The tactical or initial phase refers to specifying particular needs and selecting and contracting suppliers, while operational procurement involves ordering, monitoring and evaluation. Strategic procurement management is concerned with defining a general procurement policy that determines the strategic procurement functions of an organisation, which are to support the local government business organisations' strategies and the objectives of the local council (Hill, 2005; Lysons & Farrington, 2006; Van Weele, 2006).

The need for efficiency and effectiveness is an incentive for all organisations to tune the structure to the situation (Mintzberg & Ahlstrand, 1998). Structural changes always lag behind altered situations: how far behind depends on the pressure to be efficient. The decentralisations of health activities to the LAs in the Netherlands (Dijkhoff, 2014; Waverijn et al., 2017) have forced closer and more thorough attention to be paid to this issue. In recent years, because of these stresses in the public procurement sector, sub-optimisation has led to high internal procurement costs and legalisation of the

procurement function, instead of setting up a professional function that is aimed at using taxpayers' money as efficiently as possible.

The rational management response to this is for any form of collaboration to act more efficiently and effectively. The next section concerns definitions and further deepening of these understandings, and explores how to measure control and grip in the internal procurement function and the processes that are part of it.

2.3 Paradigm: Efficiency and Effectiveness

In this research, the concepts of efficiency and effectiveness will be used frequently. This research will examine the impact of an SCP on the management control structure of collaborative procurement services. What changes occur in the institutional procurement processes and structures that ultimately aim to increase the effectiveness and the efficiency of the PP of the LAs? More attention is necessary to gain a deep understanding of this, of performance measures and of governance structures.

Effectiveness and efficiency are shown in Figure 2-3, generally construed as ratios of overall output and goals, and input and output respectively. Verlet and Devos (2010) extend the work of Barnett, Barr, Christie, Duff, and Hext (2010) and discuss these concepts more thoroughly and reflect the concepts to productivity. This section will show how a deep understanding of this paradigm supports the research topic of this study.

2.3.1 Association with collaboration

The figure below explains the context of these terms related to this study. The model below is based on studies of the national UK government (Audit-Office-Audit-Commission-Office-For-National-Statistics, 2001; House-of-Commons-Communities-and-Local-Government-Committee, 2014). The paradigm of this study is to explore if SCP will lead to more savings, gaining values and reducing uncertainty by operating more efficiently and effectively through the LAs. To analyse those effects, the model distinguishes between three types of performance indicators: economic measurement focuses on the major costs of the input; efficiency measurement analyses the outputs in relation to the invested inputs; and effectiveness explores the extent to which the output results the outcomes demanded (Barnett et al., 2010).

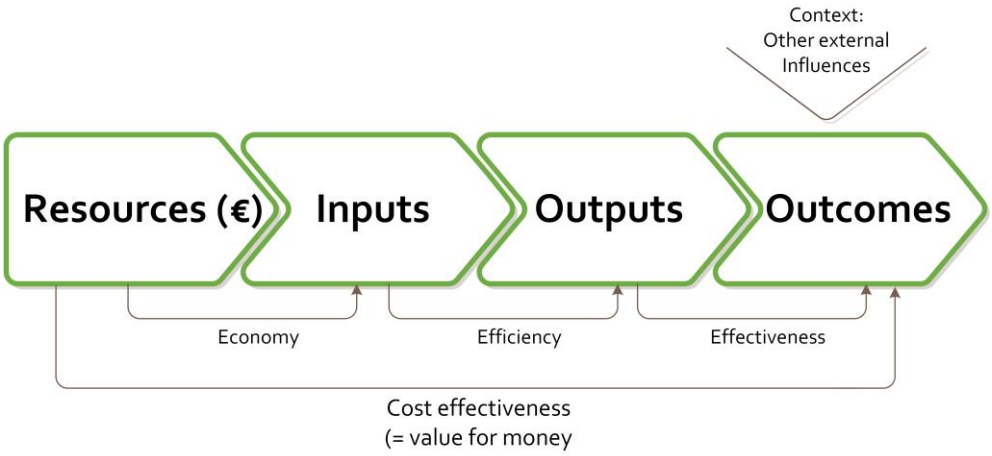


Figure 2-3 Performance- Information: Inputs, Outputs & Outcome (Audit-Office-Audit-Commission-Office-For-National-Statistics, 2001; House-of-Commons-Communities-and-Local-Government-Committee, 2014)

Verlet and Devos (2010) argue that the abovementioned model is too limited for the public sector. To assess the efficiency and effectiveness of the public sector, many aspects must be taken into consideration. Thus not only are the inputs (material, financial and capacity resources assigned to a specific task for the government) and outputs (product, volume, quality and value of goods and services produced by the government) important but so too are the outcomes (effects, events or circumstances that are the intentional or unintentional result of government action) and the process (throughput) involved. Economy is not usually presented as synonymous with efficiency. It is rather concerned with the most constructive ratio between price and quality in gaining resources (inputs). Realisation of objectives also needs to be carefully distinguished from effectiveness. In goals, achievement relates to the question of whether the intended effects have been achieved, regardless of whether these effects are the result of past policy. This points to the conclusion that the influences of structural collaboration can be explored in the procurement processes and organisation at the LAs. Thus, the general association for the LAs is the economic argument to gain procurement resources in order to execute procurement processes through outsourcing to the SCP.

LA organisations obtain their budgets from the national government with many activities assigned to them through decentralisation. Resources of money and time will be deployed (economics). The development of those activities, the communications involved, the organisations involved, and the (frequency) procurement and supply of these services compose the inputs for *efficiency*. The public organisations then measure

the satisfaction of citizens with these products and services, which respectively involve the outputs for *effectiveness*. This means, how your organisation aims to procure cost-effectively and legally by reducing procurement costs, decreasing supply risks, increasing product/service and supplier quality and improving the purchasing function.

From a less abstract to a more business view, Van Weele (2006) transformed the terms efficiency and effectiveness into the procurement function, as seen in Figure 2-3. In the next sections, the contribution of collaboration to improving procurement performance will be analysed and discussed.

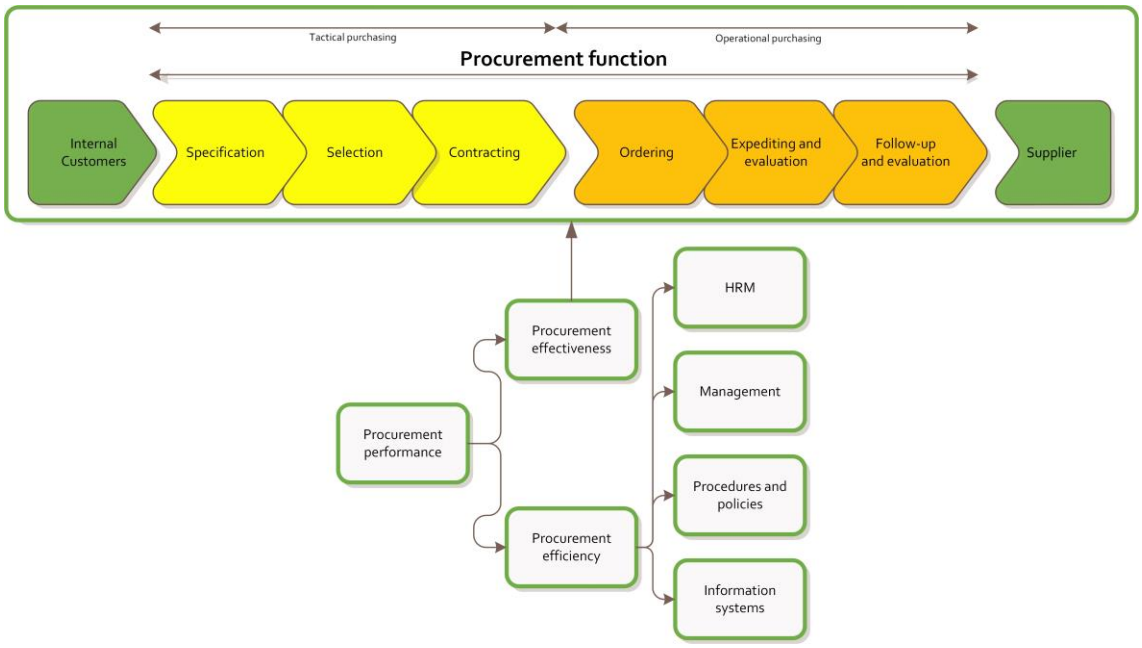


Figure 2-4 Procurement Performance Combined with Procurement Process, adapted from Van Weele, 2006 and Lysons, 2006

Unfortunately, the model of Van Weele (2005, p. 256) has certain limitations in terms of its applicability to this study. Firstly, the model is primarily developed for traditional production organisations. Secondly, effectiveness is linked to the overall goal of the procurement function in a production environment, rather than the overall organisation goal. In the public sector, general objectives can be found in services, final products, services and infrastructure works in a public society with sustainability policies. Hence, the public procurement function should contribute to the final product and process innovation and reduce local authorities' supply risk. To secure this, the procurement processes, as described by Van Weele and Rozemeijer (1996), request an effective approach instead of bureaucratic, legal and accountability exportation (Pemer, Sieweke,

Werr, Birkner, & Mohe, 2014). This requires a professional procurement function at LAs (White, Parfitt, Lee, & Mason-Jones, 2016). Therefore, measuring the performance of the procurement function is interesting for this study in connection with the procurement process of Van Weele and Rozemeijer (1996) and Lysons and Farrington (2006), to find out if the SCP contributed positively to the procurement performance (PP) of the LAs in the Netherlands, within a theoretical structure of assumptions and principles that hold together the concept of effectiveness and efficiency. This will be achieved through examining how efficiently the collaborative organisation is operating between its participants, and the effects in the procurement projects on procurement costs in the pre-stage, purchase-tender process and contract management, as shown in Figure 2-4.

The thesis explores and explains the variables which influence the outcomes of this structural form of collaboration (Barnett et al., 2010). Finally, the secondary and primary data will be incorporated to construct a conceptual framework for SCP, that connects the final sources to the research objectives (Maxwell, 2005, pp. 66-68).

2.3.2 Productivity

In general, productivity is seen as a ratio between output and input. An increase in productivity means that more output is generated from a certain input, or an established output is achieved with less input, or a more positive ratio is achieved by a (positive) change in the numerator and the denominator. Productivity says, in other words, something about converting inputs into outputs. A similar relationship can be established between output and effects. Van Weele (2006) showed this from procurement science, and recognised that effectiveness fundamentally refers to the correlation between actual and planned performance. Moreover, too much efficiency can hamper the effectiveness of the performed output.

To analyse the effectiveness of the input of the resources – for example, by executing the procurement function – the productivity ratio can be measured in several stages of the procurement process (Driedonks, Gevers, & Van Weele, 2010; Úbeda et al., 2015). The absolute value of productivity is not of interest in this study but rather the difference in productivity between individual organisations and collaborative organisations executing procurement functions and procurement projects (Waller,

2003). Additionally, Úbeda et al. (2015) identified in their research a strong correlation between cost savings and purchasing maturity. Cost savings have been measured with productivity in the procurement process. They argued convincingly that most current models Keough (1993); Reck and Long (1988) need to be sophisticated, and the purchasing tools and methodologies of purchasing maturity necessary must be empirically tested. Although they did not examine collaborative factors in their research, Úbeda et al. (2015) indicate the demand for academic research in the area of effectiveness and efficiency in procurement functions. In short, is an SCP able to influence the productivity and maturity of the procurement function of an LA?

2.3.3 Effectiveness and efficiency besides collaboration

Under the abstract terms of 'efficiency umbrella' and the 'effectiveness umbrella,' there are accurate performance indicators. For example, for the concept of ‘procurement capacity’ can be considered from an efficiency and effectiveness point of view. The performance indicator 'procurement capacity' is important for efficiency, but the indicator 'lead-time procurement process' is important for effectiveness. Organising professional procurement capacity is an effort for which sacrifices must be made (efficiency), and the lead-time / less uncertainty is the extent to which we can meet the demand from LAs for that capacity (effectiveness). Also, resources and capabilities assume product/service development and innovation (effectiveness). Similarly, sharing an e-procurement system in SCP improves the efficiency for the LA. This means there is a direct link between SCP and efficiency and effectiveness (Úbeda et al., 2015).

Various studies have shown that procurement professionalism only develops when the purchasing population comprises at least a ‘small school class’ of employees. After all, a Procurement departments section has different specialisations. On the one hand, this can be seen in the procurement structure and on the other hand in the large variety of commodities (Albano & Sparro, 2010). Generalists are by definition unable to achieve real procurement performance: for this, LAs need a variety of specialists. The equivalent of a procurement population of ‘small school class’ of employees is a spend of at least a few hundred million euros per year. Ergo, only organisations with sufficient critical mass are in a position to achieve a professional procurement function (Karjalainen, 2011). Besides, the availability of professional procurement resources is, in line with the demands of the civil servants, generalist. By outsourcing to SCP, the

principal steps in the procurement process will not change. Moreover, the 'outside provider' can add innovative and effective procurement techniques to the procurement processes.

High frequency of procurement services, through demand aggregation, makes it possible to efficiently procure and use the procurement expert capacity needed for the delivery of the services 'in house', while at the same time benefiting from structural communication lines in a strongly connected collaboration (Waverijn et al., 2017). In other words: both economies of scale (efficient use of capacity) and transaction costs (costs of coordination and availability of these services) indicate that recurring procurement services should be done within the SCP. Conversely, incidental, complex, customised procurement services are more efficiently governed within the existing SCP since centralisation of supporting procurement expert services enables a better use of capacity.

Collaboration can influence the goal orientation and effectiveness of the individual organisation and the performance that procurement achieves in the procurement process. At the strategic level, this consists of achieving the policy objectives, such as savings, sustainability, and social return objectives, ensuring availability at the tactical level and ensuring at the operational level that the supplier actually delivers the procurement performance in accordance with the contract. Aggregation and sharing of resources and capabilities can affect this effective performance. In addition to the effects of cooperation on the efficiency and effectiveness of the purchasing function, the configuration of the structure is also a determining factor for the performances (Mintzberg & Ahlstrand, 1998; Mintzbert, Jorgensen, Dougherity, & Westley, 1996).

This suggests that economic motives, technical/operational motives, political motives, and strategical/organisational motives and values all have an influence and thus offer an explanation for collaboration on efficiency and effectiveness measurements.

Economy of scale motives are caused by a reduction of the (over) capacity of resources through consolidation. A concentration of technical, management and operational expertise can affect the opportunity to standardise procurement processes and demands. Centralising of market and procurement information and consolidation of experiences

can supply up-to-date relevant information. Political motives can be found in eliminating local barriers, by using the collaborative approach on strategic programmes — for example, the implementation of 'social return' or 'small and medium enterprise (SME)' guidelines. This suggests that strategic/organisational motives for collaboration can effect synergy, stability, and concentration on innovation and can standardise functionality and processes in services.

The academic world describes limited definitions of effectiveness and efficiency in collaborative procurement organisations. Schotanus and Telgen (2007) suggest cost-effectiveness as a dimension of effectiveness. Dyer (1997) claims that effective collaboration is a minimisation of transaction costs and a maximisation of transaction value. Essig (2000) says that efficiency is the consolidation and reduction of administrative costs. Van Weele (2006) combines effectiveness and efficiency in his research on procurement performance. Subsequently he splits it up into the efficiency of the organisation regarding the procurement function and the effectiveness of the execution of the procurement process, whereby efficiency can affect effectiveness. However, many authors' definitions of effectiveness and efficiency are similar to those of Alchian and Demsetz (1972); Mintzbert et al. (1996). Nevertheless, in this research, a more detailed explanation is sought with regard to the concepts of efficiency and goal achievement in the area of structural collaborative public procurement and the challenges that the LAs face.

In this study, the definition of Van Weele (2006) is adapted, effectiveness has been converted using the procurement process of Lysons and Farrington (2006); Van Weele (2006). Effectiveness is related to the aim and objectives of the procurement function: the right products or services or infrastructure works from the right source, delivered on time and at the best value for money and linked with the organisational goals. Also, procurement should act on improvement of innovation and reduce organisation dependence and uncertainty (Driedonks, Gevers, & Van Weele, 2014; Eriksson & Westerberg, 2011; Úbeda et al., 2015). As authors such as Sporrong and Kadefors (2014) have argued, this depends on the degree of professionalism and expertise with which LA organisations execute their procurement functions. This can be influenced by the performance of the current procurement collaborative organisations.

McIvor, McCracken, and McHugh (2011) argued that although outsourced, shared collaborative services can offer economies of scales and superior capabilities of suppliers, it is unlikely that such benefits will be realised if the participating public organisations are tied to their individual internal rules – especially when the autonomy in these public organisations is decentralised. McIvor et al. (2011) argued for more attention to synchronisation of internal procedures and policies preceding imbedding new collaborative contracts. This is realising the procurement savings and to prevent misunderstandings with suppliers about the content of contracts. The strategy or action that achieves a higher level may then be reflected as more effective than the other. McIvor et al. (2011); Van Weele (2006) therefore claim that processes are a significant driver for measuring effectiveness. To measure this in the public sector, where the procurement process is built around the procedure (Loader, 2015), and to realise the goals of organisations, therefore is choosing to convert the procurement process in the effectiveness dimension of the procurement performance indicator in this research.

Efficiency in the procurement function is associated with the resources that are required to realise the goals and objectives of the procurement function, which are derived from the aim and goals of the organisation. In this study, human capital, collaborative organisation and IT systems will be part of the research. Therefore, measuring the efficiency of procurement functions is related to SCPs and finally the output at the LAs (Van Weele, 2006).

The next section reviews the current literature on collaboration, particularly in relation to effectiveness and efficiency and collaborations between public organisations.

2.4 Landscape of Literature on Collaboration in Public Procurement

Collaboration in public services is a popular phenomenon and has several variants in terms of political structures as well as organisations forms. The frequency of collaborative relationships in the public sector has been snowballing in recent years (Guo & Acar, 2005; McIvor et al., 2011). Nehmelman (2015) stated in his inauguration speech as Professor of Public Law at the University of Utrecht that organisations should not settle for fragmented collaboration but should work towards amalgamation in LAs. In his perception, local government is struggling with its additional activities in the realm of unemployment, social protection and healthcare. Aldermen are managing these

new activities with neighbouring municipalities through collaborative arrangements (De Vries, 2014). From the councils, little democratic control is possible, according to Nehmelman (2015). LAs are also having to try and address these new issues on a reduced financial budget (Telgen, 2013). Tynkkynen, Keskimaki, and Lehto (2013) found in their research a dual approach or requesting for larger LAs or outsourcing health care procurement to private service providers, to have an answer to the responsibility for providing a range of services to citizens. Academic research is therefore needed in this area to provide some fundamental direction to the discussion.

Collaboration seems like a natural option for these types of organisation, as there is little to no competition between them. In addition, some services, interests and environments are often shared (Murray et al., 2008; Schotanus & Telgen, 2007). Promoters of public collaboration suggest that it leads to better results per euro compared with organisations working individually. Sporrong and Kadefors (2014) argue that sharing of knowledge between technical departments is very costly because knowledge is closely linked to culture and identity, and a great deal of technical knowledge is rooted in technologies and procedures. Generally, most local government organisations in the Netherlands have experience with cooperation (Allers & Van Ommeren, 2016).

2.4.1 Collaboration in this research

Collaboration is a container-concept that can be approached from many points of view. However, this study focuses on the organisation of procurement collaboration between LAs, the form of organisation, the autonomy of organisations, and the sustainability of cooperation. Collaboration has been investigated in a number of different sectors. One of the recent extensions to the framework of the studies is Vereniging Van Gemeenten (VNG) and Pianoo (Ministry-of-Economic-Affairs, 2017). However the term collaboration needs to be clearly defined, as numerous terms tend to be used, such as (joint) purchase groups, SSC, purchase consortiums and joint procurement.

In this research, ‘collaboration’ refers to cooperation between LAs. This is different from collaboration between individuals in divisions, teams or projects; although, on a tactical and operational level, it is always about collaboration between societies and individuals. Organising between organisations means targeting, it must have meaning and value, it requires the deployment of resources, and probably this leads to results.

The collaboration also develops its dynamic, which can be described as its objectives and strategy, management, process design, allocation of resources and management style. In this sense, collaboration leads to a kind of community, which is part of other communities in the same, existing region.

Collaboration concerns autonomous organisations working together, which must decide jointly. Cooperation is therefore about releasing some autonomy in the expectation that releasing it will yield benefits. There is no direct control; it is therefore about speculation, mutual influence, communication, negotiation and trust in the good intentions of the other. Within organisations, control and uncertainty reduction are a vital dogma, and that can be at odds with organisation between organisations.

Collaboration is based on implicit or explicit agreements, which can take many forms. In this study, cooperation is based on explicit agreements and is formally enshrined in legal agreements and established by the municipal council. The collaboration is not a one-off, but there is no merger either. In this study, the LAs have a sustainable intention of cooperation.

There are various definitions of collaboration, for example of Pazirandeh and Herlin (2014 p. 27) '*sharing or bundling purchasing related information, processes, resources, and/or volumes by two or more agencies in a group to improve their performance*'. This definition is more focused on the incidental cooperate transaction and consolidating of demands, but less focused on structural binding and sustainable relationships between the participants.
Regarding SSCs, the definition proposed by Janssen and Joha (2006 p. 102) is more focused on collaboration in an internal organisational entity; '*A SSC is a separate and accountable semi-autonomous unit within an (inter)organizational entity, used to bundle activities and provide specific pre-defined services to the operational units within that (inter)organizational entity, on the basis of agreed conditions*'.

For the purposes of his research, Murray et al. (2008 p. 543) defined the procurement function within the SSC concept, '*A procurement shared service is one in which a number of councils jointly employ their own dedicated procurement specialist, sharing the costs, agreeing the priorities*'.

This thesis adopts the definitions of Pazirandeh and Herlin (2014)and Janssen and Joha (2006), with a slight adjustment: '*SCP is a separate and accountable semi-autonomous organisation which sharing or bundling procurement resources, capabilities, processes, knowledge and by two or more LAs to improve their procurement performance'*. The rationale for the adjustment in the definition, indicated by parentheses, is the fact that SCP involves structure and binding in a region and therefore provides additional internal management aspects of the LAs.

2.4.2 Structures of procurement collaboration

Previous perspectives

Notwithstanding its long history, collaborative procurement, also known as cooperative purchasing, has received little attention in business economics or social sciences (Dorger, 1999; C. Hill & Lynn, 2003). Compared with research on service centres or vertical buyer-seller collaboration, horizontal buyer-buyer structural collaboration has not received significant academic attention until now (Janssen & Joha, 2008; Janssen et al., 2007; Janssen, Joha, & Zuurmond, 2009; Richter & Brühl, 2017). This seems unjustified as cooperative purchasing focuses on purchasing groups and gaining savings through economies of scale (Schotanus & Telgen, 2007; Tella & Virolainen, 2005). As a result of the economic downturn, questions of centralising or decentralising have demanded more research on this subject (Sartor, Orzes, Nassimbeni, Jia, & Lamming, 2014). They also found that the *politics and management* can stimulate cooperation between municipalities. Walker, Schotanus, Bakker, and Harland (2013) found evidence that local politics can hamper collaborative procurement in the public sector. The transformational process can be positively affected in the structure of the collaboration by prior cooperation structures, which is important when building collaboration on the basis of a trustful relationship. However, Niehaves and Krause (2010) did not find empirical evidence for cost savings and efficiency advantages by centralising the procurement of collaboration. It would have been valuable for them to research the financial elements of collaboration in their study to see if money had been saved.

Shared service centre

A *shared service centre* is a form of cooperation, whereby the forces of individual official organisations are consolidated within a new joint organisation. This kind of collaboration works on behalf of the participating organisations. Staff from the parent organisations are transferred to the new organisation. The shared service centre is found in the literature to be particularly suitable for achieving more professional service and reducing vulnerability (Richter & Brühl, 2017; Schulz & Brenner, 2010). Also, organisation costs will be reduced through economies of scale and cost advantages. In addition, a shared service centre can expand its activities with other tasks relatively easily, because of the limited shareholders and internal business focus. This form of cooperation has been widely used and studied in the Netherlands in recent years (Janssen & Joha, 2008; Janssen et al., 2007).

Janssen et al. (2007) analysed the different exchange dimensions that exist between clients and shared service organisations through the outsourcing relationships framework put forward by Kern and Willcocks (2002) They confirmed the expectations of Kern and Willcocks (2002), that this framework can help in analysing relationships in outsourcing arrangements based on the social exchange theory. However they did not explore a key issue; the underlying components of cost savings and whether these influence the relationship between shared service centres and municipalities. On the other hand, they showed that potential cost saving is one of the main expected objectives in the context dimension. A different approach from Niehaves and Krause (2010) showed that cost pressure is the main motive for the emergence of collaboration, which justified further research into the cost savings that could potentially be achieved through internal collaboration. Niehaves and Krause (2010) showed that cost pressure is the major player in the existence and beginning of many examples of collaboration. Their research is in contrast with the current situation in the Netherlands shared service centres being established to facilitate the decentralisation of youth care services to local governments; the major forces at play are expertise, professionals, continuity, and cost savings through efficiency and effectiveness (Telgen, 2013). In general line with this are the latest findings of Richter and Brühl (2017), which demand more study on the output effects of the SSC and clarification of the financial and nonfinancial consequences of SSC introduction.

Typologies of cooperative purchasing: groups of purchasing

Schotanus and Telgen (2007) made a typology of organisational forms of cooperative purchasing in the public sector. They appointed *groups of purchasing* typologies based on several dimensions. These dimensions were based on previous studies of D'Aunno and Zuckerman (1987); Dyer and Singh (1998); Enthoven (1994); Galaskiewicz (1985); Klein Woolthuis (1999); Nollet and Beaulieu (2003, 2005). They measured these dimensions on several levels and plotted them in groups. They created a typology per purchasing group with specific characteristics, which implies that some of the typologies are more suitable to particular situations than others. They did not find fundamental evidence of lower transaction costs or more secure resources as a result of different forms of cooperative purchasing. They also assumed in their research that voluntary purchasing groups perform the best because of the cost-effective driver for all of their members. In contrast, fragmented and independent organisations, with their own decision-making competences, are often not tooled with a professional procurement organisation (Murray et al., 2008; Patrucco et al., 2018). Therefore most decision power is mandated to general managers, who are driven by budgets and deadlines. In public organisations, these general managers can often use advice from a supportive procurement department. Recent research by Patrucco et al. (2018)showed that these support procurement units are focused on procedures, without any involvement in strategy, product-services content, or planning. This can lead to sub-optimisation, inefficiency and ineffectiveness. These organisations often do not have the expertise to join the most appropriate forms of purchasing group. Therefore, it would be interesting to study if fragmented local government organisations can gain savings or add value through a more efficient and effective *structural procurement* function through collaboration with each other.

Voluntary or mandatory

A significant amount of research has assumed in their research that voluntary purchasing groups perform the best because of the driver of cost-effectiveness for their members Schotanus and Telgen (2007). On the other hand, fragmented and independent organisations with their own decision-making power are often not tooled with a professional procurement organisation (Allers & Van Ommeren, 2016). As previously stated, so most decision power has been mandated to general managers, who are driven by budgets and deadlines. This input from other actors can be gained through business

networks. Business relationships and business networks also arise from a certain necessity – they are the result of business strategy. This sharing of resources can be initiated from politics or from the boards of organisations. Walker et al. (2013) find evidence in their study that local politics can hamper collaborative procurement in the public sector in their region. This indicates that transformational process can be positively affected in the structure of the collaboration by prior cooperation structures, which are important for building collaboration in a trustful relationship.

Further development of structuralism in collaboration

Murray et al. (2008); Sporrong and Kadefors (2014) call for more structural collaboration. Moreover, in their case studies they found evidence that voluntary collaboration does not lead to maximisation of knowledge exchange. Knowledge is closely coupled to each individual person and their skills and role in a particular organisation; it also demonstrates competency in a professional, which allows them to exercise an exclusive position within their organisation (Levitt, Wang, Ho, & Javernick-Will, 2012). Although there are benefits from voluntary knowledge-sharing, voluntary collaboration can be very expensive and still not produce the desired goals (Carlile, 2002). Although Sporrong and Kadefors (2014) conducted their research primarily in technology communities in the public sector, they suggested that strategic and structural policies are essential to gain results from collaboration. Walker et al. (2013) showed a significant difference between the applicability of collaboration in the private sector and the public sector: the public sector is hindered by local politics, the priorities of the professionals and the accessibility of the staff (Levitt et al., 2012).

From that view, Murray et al. (2008) suggests securing structural collaborative procurement by establishing or integrating it in an existing or new shared service centre. A shared service centre is a form of cooperation, which utilises the forces of the individual official organisations within a joint organisation (Janssen et al., 2007). This kind of collaboration works on behalf of the organisations involved and staff from the parent organisations are transferred to the new organisation, mainly focused on internal secondary processes (De Boer, Holmen, & Pop-Sitar, 2003).

This research will focus on local government, exclusively LAs, which are involved in several regional collaborative agencies (Proulx et al., 2014). These regional agencies are

executing several public obligations and tasks for local government organisations. Some of those agencies are shared service centres for IT or human resource management, or a hybrid form, for example fire & security organisations, regional innovation centres, and regional social youth care centres and environment agencies. These agencies are similarly owned by the regional LAs but mainly outsourced and operating as separate public organisations. The procurement function of those agencies is integrated in their business model; moreover, every agency is obliged to act in line with national legislation, European legislation and the procurement policies of their local government organisations. In order to prevent inefficiency between LAs, SCPs and agencies in the same collaborative region, coordination of procurement activities is necessary (Allers & Van Ommeren, 2016).

2.4.3 Gains by collaborative procurement

Murray et al. (2008) showed the value of collaborative procurement from the perspective of hard and soft core. In their case study, they studied six structured procurement collaborations at the local level in the UK. One of their findings was that a procurement-shared service has benefits from both the intra-organisational hard and soft-core models (Van Weele & Rosemijer, 1998) and the inter-organisational participation but not non-committal of purchasing group (Nollet & Beaulieu, 2005). On the other hand, they did not mention the gains discovered by Janssen et al. (2007) of decreasing staff in the context of efficiency of intra-organisational participation through structural collaboration. The motivation for most of the cases studied was to save money through economies of scale (Niehaves & Krause, 2010). Hence, as shown by Walker et al. (2013) too, there is a need for empirical evidence to show that structural collaborative procurement brings value and cost savings.

Murray et al. (2008) also show small councils gaining professional procurement capacity. Although providing additional procurement capacity can be seen as a quantitative gain, it would be more interesting if they had linked these additional costs to the procurement results based on efficiency, and reducing risks by pooling available resources of the collaboration. Besides direct cost reduction, it would have been interesting if they had also researched the value of the qualitative resources provided by collaboration. For example, by calculating the costs for a stand-alone individual municipality and the costs for a structural collaborative procurement organisation.

Transaction costs were expected to be gained through standardisation if collaboration was the default option. Unfortunately, this is not measured in their research. However, structural collaborative procurement assumes cost reductions and added value (Krueger & McGuire, 2005; Murray et al., 2008). Therefore, it would be interesting to find if there is any empirical justification for this.

Among the main enablers mentioned in paragraph 2.4.3 are sharing information and expertise. According to Murray et al. (2008); Schotanus, Telgen, and De Boer (2010), this should help in gaining understanding and exchanging market and product information and best practices regarding effective procurement functions. Sharing market information would mean that less time would be required for conducting market research in the specification phase. Specifications, contracts and procurement techniques can be used significantly less. Also, the performance of suppliers can be compared in different agencies. In special product commodities, parts of the supply stage can be combined – mainly contract management. Finally, agencies can learn how other organisations have used procurement functions. In summary, sharing information and expertise in all aspects of the purchasing function is beneficial. Dorger (1999) argued that through cooperation, cost-effectiveness can be increased.

However, this section indicates that there is a lack of empirical evidence on whether collaborative procurement enhances effectiveness and efficiency and brings cost savings in professional procurement functions.

2.4.4 Collaboration in public procurement - advantages and disadvantages

Collaboration in public procurement can bring efficiency advantages by sharing volumes because individual organisations spend less time and resources on executing purchasing processes. The concept of cooperative purchasing or JPG is often associated with collaborative procurement. In this research, structural collaborative procurement (SCP) is a much broader internal organisational concept; it focuses more on the efficiency and effectiveness of collaborative procurement organisation than joint procurement alone. SCP is more comparable with the SSC concept (Allers & Van Ommeren, 2016; Murray et al., 2008), meanwhile cooperating with more LAs in an internal and external environment. LAs can rely more on an SCP for their primary

business procurement activities, than if they had joined a national or regional JPG (Nollet & Beaulieu, 2005; Pazirandeh & Herlin, 2014).

Dyer and Singh (1998) distinguished relational enablers of collaboration. Walker et al. (2013) used these dimensions in their study to explore the enablers of and barriers to collaboration in public procurement.

Several drawbacks of the operating model need to be kept in mind when considering this approach. Pazirandeh and Herlin (2014) could not determine whether collaborative procurement can drive, or limit the practice caused by regulations. The cycle time to execute procurement projects tends to be longer in the case of purchasing groups aiming to maximise their effectiveness (Schotanus et al., 2010). Recent research by Meehan et al. (2016) shows from the point of view of behaviour and institutional theory the barriers to collaborative public procurement, lack of alignment between national, regional and local commitment leading to an unsuccessful national framework. Collaborative procurement policies create tensions between cost, compliance and quality considerations across intra-organisational stakeholder groups, and between inter-organisational collaborating authorities, where different social values, rules and rationalities may exist. The large national public organisations have a dominating and determining role in the procurement strategy. Therefore, Nollet and Beaulieu (2005) argued for homogeneity among members and their interests. These predominant role of the large national public organisation can be attributed to the lack of professional procurement and material expertise at the small LAs, whereas equal organisations are more likely to share knowledge rather than draining it (Sergeeva & Andreeva, 2015).

According to Lysons and Farrington (2006), the disadvantages of centralisation stem largely from attitudinal problems (such as maverick buying) and the difficulty of controlling processes remotely. Similarly, Van Weele (2006) refers to excessive overhead costs and slow responses to divisional matters as a problem of centralisation. Another problem is that, there may be a lack of availability of information about the decentralised needs of the local government and their agencies after a centralised system has been implemented (Proulx et al., 2014; Sartor et al., 2014). However, Kastanioti, Kontodimopoulos, Stasinopoulos, Kapetaneas, and Polyzos (2013) call for more research into the field of whether centralised or decentralised procurement is more suitable for innovation and why public organisations are more costly than private ones.

Speed of payment and the capacity to negotiate are the key differentiating factors. In certain EU countries with decentralised procurement, there is a clear trend to centralise procurement as a way to reinforce market power, bundle knowledge and reduce the administrative costs to public organisations (Vogel, 2009).

A frequent complaint of employers' sector organisations is that small suppliers are unable to compete due to the big purchasing volumes required, oligopolies might be formed in the market and competition is therefore decreased (Nollet & Beaulieu, 2005; Vogel, 2009). According to Pazirandeh (2012), there is real concern that there are too few suppliers to fulfil the requirements of governmental invitations for tenders and who are able to provide the total volume required. In contrast to the anxiety of the mentioned academics to restrict changes for the small and medium enterprises, Schotanus and Telgen (2007) argue that improvement of demands and better transparency of information through collaboration can lead to more intensive partnerships. Nevertheless, in the Netherlands, in the public procurement law, it is forbidden to bundle tenders. The scale of the tender must be proportional to the firms on the market. Thus, even in collaborative procurement, tenders have to be divided into lots (Union, 2010). This requires a professional way of procurement by the collaborative organisation in the pre-stage where the sourcing strategy is established, as described in section 2.2.2 and in Figure 2-5.

According to Essig (2000); Nollet and Beaulieu (2005); Schotanus et al. (2010), typical disadvantages of collaborative procurement are start-up costs, coordination costs during sourcing and supply, loss of flexibility, loss of control, supplier resistance and anti-trust issues. These issues could play a significant role in starting new SCPs. LAs should invest in advance in the organisation, structures, and people. This investment is for the longer term, rather than incidentally participating in a joint purchasing process. Therefore, the goals of an SSC and an SCP are based on issues relating to the continuity of the LAs, such as value, securing delivery, and structural cost efficiency.

Walker et al. (2013) studied the *benefits and pitfalls* of collaboration from a relational theory perspective. They found differences in procurement objectives between branches of the public sector. This can limit the universal character of participation. Their findings argue for more collaboration between equal branches, such as local government

or fire organisations or health care organisations. On the other hand, procurement objectives concern effective procurement functions, such as SMEs or innovation. The aim of this study is not to challenge this view, but rather to examine how structural collaboration can be made more efficient and effective, not only in effective procurement performance but also in efficiency components, as shown in Figure 2-4. In terms of effective performance, this study will fill the gap in the research regarding structural collaborative procurement from the perspective of local government in the Netherlands.

Also,Walker et al. (2013) found that there was a need for clear calculation methods to show the value of collaboration to stakeholders. One contribution of this study will be providing empirical evidence to demonstrate if SCP brings additional value or cost savings at the local government level.

2.4.5 Outsourcing procurement functions to collaborative procurement organisations

Fundamentally, collaboration or a consortium is a manner of outsourcing the procurement function. Outsourcing is a possible solution to decrease costs and is compatible with cost reduction drivers (Montresor, 2004; Sporrong & Kadefors, 2014). On the other hand, Murray et al. (2008) showed in their research that financial savings were expected in the execution of procurement strategies and by sharing knowledge using standard documents. Transaction cost reductions were claimed through sharing best practice and problems so as to avoid “re-inventing the wheel”. In contrast, these public organisations were not obliged to participate as it was on a voluntary basis. Also, the researched objects, municipalities, were members of procurement collaborations, with several structured arrangements. The study was limited in terms of to what extent those shared service gains would continue to be achieved or whether they constituted one-off gains, and therefore implied that procurement collaboration may only be an interim solution. So a cost-benefit analysis would be advised to analyse if the cost of the strategic procurement is recovered from the cost savings gained from the collaboration. How larger the local authority, how more professional the financial consideration, stated Murray et al. (2008) in his research.

Brewer, Wallin, and Ashenbaum (2014) found that anxiety about opportunism defined the range of outsourcing of the procurement function. Opportunism signifies the risk that one of the parties in the transaction will take advantage of the other if the opportunity presents. Focusing on the financial benefits, they find causality between the resource position and the potential for opportunism. However they did not research the cost saving positive influence, and only addressed the rational costs effects in a limited way.

Several researchers have determined reasons and drivers to outsource; a couple are displayed in Table 2-1. Ghodeswar and Vaidyanathan (2008) determined that there are four potential drivers to outsource a business process. The organisational driver refers to achieving more focus on core business processes but also improving the company's flexibility and trying to achieve higher stakeholder value. The improvement driver refers to improving operating performance by obtaining expertise, knowledge, skills and technologies. The financial and cost driver refers to reducing needed investments and costs. The last driver, revenue, refers to growing market access and leveraging capacity, processes and systems from a service provider which operates at the best-in-class level. Inopportunely, they illustrated their findings on two case studies and analysed two generalised parameters: value and core process.

According to Fernandez and Kekale (2007) companies are better positioned to react to cost pressures when they have outsourced their procurement function. This outsourcing could lead to several benefits but a trade-off needs to be kept in mind. There will be a trade-off between the cost savings and the necessary big changes to make outsourcing possible. While cost reductions may be seen as the main benefit of outsourcing, other possible benefits, which can be created by procurement outsourcing, are efficiency level improvements and cycle reductions since these third parties have specialised knowledge (Lankford & Parsa, 1999). Further, the company can refocus on other strategic functions with more attention (Quélin & Duhamel, 2003). Quélin and Duhamel (2003) state that outsourcing a particular business process can help to spread risks more optimally and to avoid large investments. However, this statement might be seen as twofold since outsourcing also requires some big investments.

Moreover, Kakabadse and Kakabadse (2002) found that access to external expertise, which could lead to improved quality, could also be a driver for outsourcing. Harland, Knight, Lamming, and Walker (2005) identified that outsourcing can produce "complementary assets" which results in a firm not being chained to its own assets. In Table 2-1, the types of drivers that enable activities for outsourcing have been summarised.

Table 2-1 Types of Drivers and Advantages of Outsourcing

Literature	Type of Drivers of Outsourcing
Ghodeswar and Vaidyanathan (2008)	Distinction between four kinds of drivers: organisational, improvement, financial and cost, and revenue drivers;
Fernandez and Kekale (2007)	Cost savings;
(Ghodeswar & Vaidyanathan, 2008; Lankford & Parsa, 1999)	Cost reductions, specialised knowledge of outsourced vendor and refocus on core business processes;
(Quélin & Duhamel, 2003)	Cost savings, but also a growth tool for core activities, way to increase flexibility and way to gain access to external expertise;
(Kakabadse & Kakabadse, 2002)	Achieve best practices and enhance cost discipline and control skills of manager, improve service quality and focus on core competencies, and gain access to new external expertise;
(Harland et al., 2005)	Cost savings, focus on core activities, not limited to own assets, external advanced technologies, greater workforce flexibility;
(Brewer et al., 2014)	Take account of multiple drivers, stated by RBT and the TCT, in considering the outsourcing decision of the procurement function;
(Pulles, Veldman, & Schiele, 2014)	Innovation added by strategic suppliers;
(Bals & Turkulainen, 2017)	Improve efficiency by increased harmonisation and standardisation, as well as effectiveness by increased transparency.

This indicates that the main drivers for outsourcing come back to cost-reduction, new or improved skills, and innovation. Also, an interesting driver is that besides the direct benefits of outsourcing (procurement) processes, even by implementing the processes the activities can become more centralised and or standardised.

This study will research if savings can be gained through structural collaborative procurement. This implies, from the transaction economics view, that local government organisations can save money by fully or partly outsourcing their procurement function to collaborative organisations. From the perspective of the TCT, the decision to outsource activities or execute an activity in-house is mainly concerned with the boundaries of the organisation and opportunism (Williamson, 1985). Therefore, Brewer et al. (2014) searched for an explanation to provide understanding of the development of procurement outsourcing. In their study, they used the framework from McIvor (2009). McIvor (2009) found that when an organisation has a weaker resource position and there is low potential for opportunism, they are more likely to outsource certain activities. These first careful conclusions are interesting.

For outsourcing the procurement function, the rapidly increasing number of initiatives taken by LAs to set up SCPs is obvious. Two distinct forms are collaboration through a formal and separate third party, and collaboration through informal and virtual organisations. An SCP is a form of shared service provider but separate, which advises on and executes various public organisation procurement activities (Bakker et al., 2006; Murray et al., 2008). Bals and Turkulainen (2017)defines outsourcing as '*the decision to move some of a firm's internal activities and decision-making responsibilities to outside providers*'. From that point of view, An SCP can be recognised as an outside provider for procurement services. On the other hand, the SCP is distinguished by the fact that it is bounded in the governance structure of its stakeholders. This means that outsourcing can apply in theory to private or public operators, while the SCP is restricted to providing services to its stakeholders, the LAs.

The study by Brewer et al. (2014)showed that outsourcing mainly depends on the majority of the procurement organisations, at each stage in the procurement process. LAs and public agencies can decide at which stage they can collaborate with a procurement collaboration organisation. Also several researchers have different approaches. The below-mentioned stages can be used for determining the boundaries of the LA and which should be collaborated with partners (Brewer et al., 2014).

- Providing outsourcing of the *strategic* procurement function by collaboration and value to the core business of the local government organisation.

- Providing outsourcing of the *tactical* procurement function by collaboration and value to the core business of the local government organisation.
- Providing outsourcing of the *operational* procurement function by collaboration and value to the core business of the local government organisation.
- Establishing a total cost of acquisition versus in-house costs.

In the discussion of the outsourcing procurement function, and in according to the notion of the Core-competence theory (Hamel & Prahalad, 1990), it allows LAs to break down the procurement function in those mentioned stages to make the final 'make or buy' decision on each of those. In contrast with the private sector where activity-based organisation requests more short cyclical demands for procurement expertise (Bals & Turkulainen, 2017), the public sector requires more stability in the procurement function and a concern for the long term, to secure the strategic, tactical procurement function (Harland et al., 2005).

Brewer et al. (2014) researched the extent to which procurement functions are being outsourced. They used a five-step framework, narrowed to the procurement process, comparable with the structure used in this study and shown in Figure 2-5.

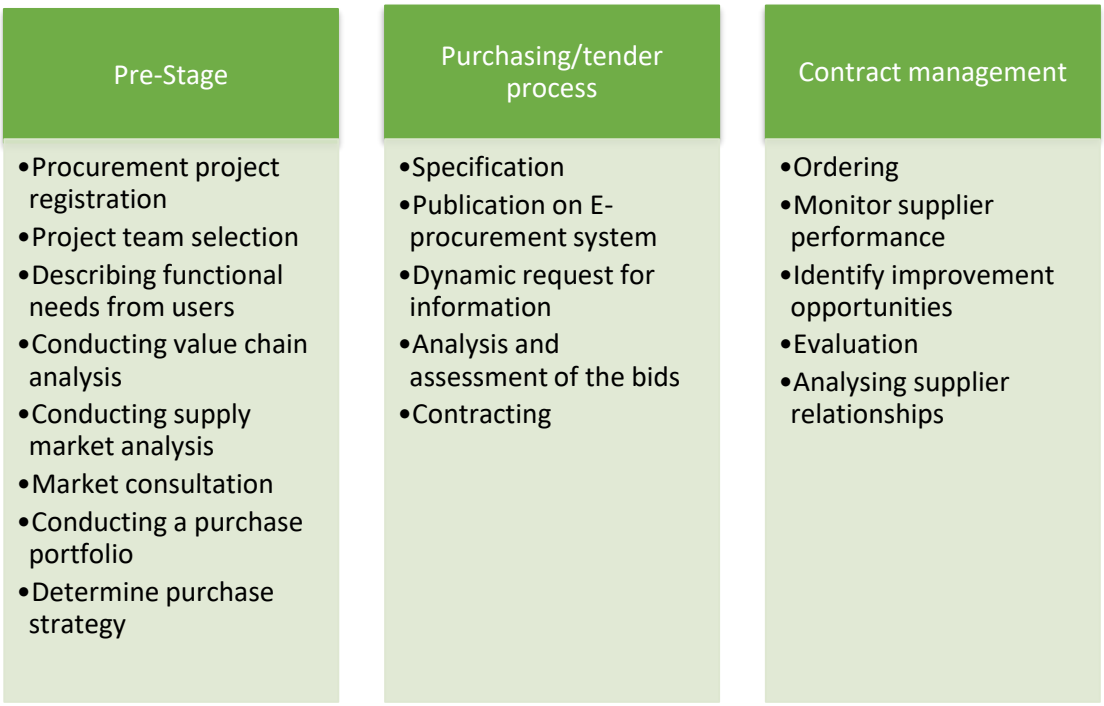


Figure 2-5 Stages in a (Collaborative) Procurement Project

This subdivision makes it possible not to outsource core activities with a strategic character or to outsource them partially.

Pre-stage

The procurement strategy contains objectives of the business strategy, which need to be realised by entrepreneurs (Mintzberg & Ahlstrand, 1998). For this, it is essential that this should be interconnected together optimally. LAs will not outsource this process in the first instance, but in order to make good choices they will have to master procurement techniques such as conducting value chain analysis, supply market analysis, market consultation, conducting a purchase portfolio and, finally, determining procurement strategy. The procurement strategy is a essential part of the pre-stage in the procurement process, whereby LAs can be facilitated by outside providers (Bals & Turkulainen, 2017). The role of the LAs depends on the degree of core activity and thus the internal knowledge of the commodity or activity. The strategy of LAs is to perform as a management-organisation whereby procurement is the most important critical factor to actually realising the benefits of outsourcing (Patrucco et al., 2018).

Purchase/tender process

More and more of the procurement / tender process is now facilitated by IT software, also securing the process and the regulations (Salianji, 2017). This requires skills and frequently executing of this process, to prevent failures, besides latent economies of scale in the transaction (Karjalainen, 2011). Furthermore, this activity can be characterised as non-core and transactional, which means it can be centralised or outsourced to facilitated providers (Bals & Turkulainen, 2017). On the other hand, to control procurement activities, with potential loss of opportunities in cost, time and quality performance, and pay attention to strategic procurement goals (e.g. sustainability; innovation), the configuration has to be designed to guarantee the normative and regulatory aspects of procurement and to have direct control over procurement activities (Patrucco et al., 2018).Therefore, outsourcing to a single strategic procurement partner is more obvious.

Contract management

Centralisation of post-purchasing activities as, monitoring supplier performance, identifying improvement opportunities, evaluation and analysing supplier relationships, can lead to decreasing of the post-transaction costs (Costantino, Dotoli, Falagario, & Sciancalepore, 2012). Reinforced by study of Bals and Turkulainen (2017), although they noted to restrict outsourcing to data management and reporting focused on shielded activities. For example contract registration of the activity health care contracts can be outsourced to a external provider. While simultaneously internal core employees could concentrate on the strategic tasks.

So from this perspective, the most interesting fields to research can be found in the preface, sourcing and supply phases. It will be explored at a later stage if local governments and their agencies optimise the outsource-gap (more) of (which) parts of the procurement function to their structural collaborative procurement organisation. Moreover research of Brewer et al. (2014) showed that (>50%) of organisations have less access to procurement function resources, in particular procurement strategy, evaluating suppliers and less potential for opportunism; outsourcing of the procurement function is therefore an interesting alternative, instead of doing the procurement function on their own. Worth noting is that Brewer et al. (2014) conducted their research in the context of United States-based electronics manufacturing organisations rather than public sector organisations.

However, while there are benefits and drivers associated with outsourcing a business process, like procurement, only a few companies have done so (Fernandez & Kekale, 2007). Aversion to outsourcing seems to result from a perceived loss of control and increase of risk (Van Weele, 2006). To encourage companies to outsource their procurement function, some researchers have attempted to deal with the issues related to outsourcing a business process. Barthelemy (2003) identified some ‘core sins’ which cause outsourcing efforts to fail. These sins are mistakes made by the outsourcing company and are presented below.

- Selecting the wrong vendor;
- writing a poor contract;
- Overlooking personnel issues;
- Losing control over the outsourced activity;

- Overlooking the hidden costs of outsourcing;
- Failing to plan an exit strategy.

Barthelemy (2003) focused on 'why' problems may occur, in contrast with (Freytag, Clarke, & Evald, 2012) who researched 'what' options firms have when reassessing their chosen outsourcing solution. Both works fill the gap in the outsourcing literature regarding how firms solve problematic outsourcing experiences or handle new possibilities arising from internal or external changes.

Freytag et al. (2012) analysed existing theories for practical cases that provide knowledge about *what* firms do to solve outsourcing problems. As a result, four generic solutions were identified when a firm wants to continue with an outsourced activity; the different rationales behind each generic solution were given. Three theoretical perspectives encouraged these motivations: the cost-based view, competence-based view and relationship-based view. By highlighting different rationales behind the four generic solutions, the limitations of the three perspectives were demonstrated, and a need for a more rich and universal view in the choice of outsourcing solutions was emphasised. Changing external and internal environmental factors, or a situation where there is no history experience, are confirming (Van Weele, 2006) a matter of consideration of the risks. These risks and uncertainties will be covered up by detailed contracts.

Outsourcing of the procurement function and the research aim and objectives

The strategic procurement function brings a long-term change in the procurement performance (Murray et al., 2008). Strategic elements of a public procurement organisation are related to dimensions of the core-competence theory. Organisations are more engaged in outsourcing strategic processes if the outsourcing provides more value, reduces costs, extends the scope and scale of government activities, or enhances the organisation's reputation (Bhagat, Byramjee, & Taiani, 2010).

Ghodeswar and Vaidyanathan (2008) determined that there are four potential drivers to outsource a business process. The organisational driver refers to achieving more focus on core business processes but also improving the company's flexibility and trying to achieve higher stakeholder value. The improvement driver refers to improving operating

performance by obtaining expertise, knowledge, skills and technologies. The financial and cost driver refers to reducing needed investments and costs. The last driver, revenue, refers to growing market access and leveraging capacity, processes and systems from a service provider which operates at the best-in-class level.

According to Fernandez and Kekale (2007), companies are better positioned to react to cost pressures when they have outsourced their procurement function. This outsourcing could lead to several benefits, but a trade-off needs to be kept in mind. There will be a trade-off between cost savings and the big changes necessary to make outsourcing possible. While cost reductions may be seen as the main benefit of outsourcing, other possible benefits which can be created by procurement outsourcing are efficiency level improvements and cycle reductions since these third parties have specialised knowledge (Lankford & Parsa, 1999).

In Table 2-2, the research objectives of this study are linked to arguments of outsourcing the strategic procurement function premised to the PP. The procurement activities have been broken down into smaller activities to make the 'make or buy' decision individually (Bals & Turkulainen, 2017).

Table 2-2 Research Objectives Linked to Outsourcing the Strategic Procurement Function

	Arguments for outsourcing the strategic procurement function premised to PP for LAs			Research objectives		
Activity in procurement function	Cost reduction	Extend scope and scale of government activities / business	Improving professionalism	RO1 Add value	RO2 Less uncertainty	RO3 Cost Reduction
Pre-stage / strategy						
Procurement knowledge centre		X	X	X		
Council procurement strategy		X	X	X	X	

	Arguments for outsourcing the strategic procurement function premised to PP for LAs			Research objectives		
Flexibility		X			X	X
Professional procurement			X	X	X	X
Market governance		X	X	X		
Innovation		X	X	X		
Sustainability		X	X	X		
Specification	X	X		X		X
Sourcing						
Tendering	X	X				X
Contracting		X				X
Contract Management						
Evaluation		X		X		X

However, to make sure that collaborative procurement achieves its goals – reducing waste, improving outcomes for taxpayers and improving the socio-economic situation – some enablers need to be achieved (Chapman, Gupta, & Mango, 1998; Proulx et al., 2014). First of all, some relational and human resource-specific investments in assets are required to make collaborative procurement succeed. In the case of SCP, and also other hybrid copies of it in the Netherlands, investments are made by multiple local governments to found a separate third agency to execute the procurement activities for all of them.

Further, there needs to be substantial knowledge exchange to stimulate joint and continued learning. Also to enable collaborative procurement, scarce but also complementary resources or capabilities must be combined (Caniëls & Roeleveld, 2009; Freytag et al., 2012). An example of these resources and capabilities is the manpower in the procurement consultancy of SCP which can adjust to every situation and also lead to new services, like the execution of the procurement function of local government organisations. The last necessary enabler is effective governance, which can help to

lower transaction costs or to increase the willingness of the participating organisations to engage in initiatives, which could create value.

So for local government organisations and their agencies enabling SCP to execute the procurement function, they do need to recognise the core sins and steps of outsourcing. Besides that, they also need to keep the enablers of collaborative procurement in mind, which are caused by and influence their own organisation (Allal-Chérif & Maira, 2011; McCue & Prier, 2007; Van Puyvelde, Caers, Du Bois, & Jegers, 2014).

This study seeks to find if similar LAs in the Netherlands and those local authorities that are members of existing structural collaborative procurement organisations have less access to procurement resources in their own organisations or whether they have too much or perform a part of this function insufficiently. Are those organisations characterised as less opportunistic, and are there no circumstances surrounding the procurement projects that are unknown? Organisations that are considering an SCP can use these arguments for their strategic considerations. The next section will view the importance and the relevance of the theories which underpin this study.

2.5 The Relevance of Theories: TCT and RBT

A better understanding of these questions can enriched by valuable theoretical insights for two reasons. First, SCP participation represents conscious managerial and administrative choices that change the LA 'firm' boundary, which is a central component of economic theories (Williamson, 1981). In the practical business environment managerial decision making is influenced by their rational business models derived from prior experience (Weick, 1993). The business performance of the LAs provides an empirical basis for measuring their output alongside the normative prescriptions of the economic and strategic theories, including: TCT and RBT.
Second, although there is large variance in collaborative success in the public sector, SCP practices are still emerging and no robust frameworks yet exist to guide, or improve such choices. Therefore, understanding the intellectual decision models that LAs apply can provide novel insights into SCP practices.

Also, horizontal collaborative (structural) public procurement arrangements are often classified in the literature as 'outsourcing' internal business processes to shared services

agencies (McIvor et al., 2011; Murray et al., 2008; Nehmelman, 2015). Section 2.4.5 provided arguments for outsourcing vary, and the conceptual frameworks (Bals & Turkulainen, 2017; Bhagat et al., 2010; Bustinza, Arias-Aranda, & Gutierrez-Gutierrez, 2010) which have been used to explain the practice and degree of success achieved include RBT and TCT features.

The list of types of collaborative public procurement arrangements before describes the various forms which have emerged in the last years. Motives for collaboration vary, and the conceptual frameworks which have been used to explain the practice and degree of success obtained, through several theories. As might be expected, none of these approaches explain all the performance of SCP, observed in practice in collaboration in the PP sector, although most explain some of the behaviour, and help to predict the likely impact of SCP. This section explains the explanatory principles of these two theories and their influence. Although there are theories borrowed from distinct domains, this study identifies patterns in three categories. Namely, economic theories have been used to theoretically investigate the added value for the LAs, financial benefits and coordination between economic agents (SCPs) and the LAs.

The TCT helps to determine which segment of the procurement function can be done most cost-effectively in-house by the individual LA organisation and which can be outsourced by LA organisations within a particular area without loss of future requirements in expertise and limiting the business uncertainty. Is insourcing of strategic, tactical and operational procurement capability, essential and expedient for the core business of the LA organisation, or is the availability through SCP eligible? Arguments on total cost of outsourcing, versus in-house costs and qualified availability can be associated with the TCT , which assumes that this collaboration form is chosen, with the total of the service costs and the transaction costs being the lowest. This is then also the collaborative organisational form, also referred to ‘governance structure’, which can be regarded as the most efficient; a hierarchical organisation with central managing (Williamson, 1985).

Specifically, transaction cost economics has been used to explore factors in terms of transaction costs in the stages of a collaborative procurement project, which can address research objective three. TCT identifying avoids the duplication of transaction costs that

would arise if each purchasing unit were to conduct the procurement process on an individual basis.

Besides, the transaction cost theory investigates the collaboration between SCPs and LAs and delivers suggestions for designing and influencing coordination mechanisms related to the costs. This is especially in the outcome of collaboration between SCP and LAs, whereby the effective output by the role of information systems in maintaining behaviour control can influence the uncertainty in the procurement function of the LAs and in the collaborative procurement arrangements.

Through features of the RBT, the research will explore if and how collaboration adds value by filling the gaps in the resources and managerial capabilities in the field of PP. Warnier, Weppe, and Lecocq (2013) distinguished between strategic resources, ordinary resources and junk resources. The critical issues will be if the LA retains complementary competences through SCP. Competences in certain stage(s) of the procurement process or adding opportunism in the procurement processes (Brewer et al., 2014)? The influence of the RBT in the SCP depends mainly on majority and the in-house capacity of the procurement department of the LAs, including the obtainability of robustly professional procurement expertise (Allers & Van Ommeren, 2016).

The present extant literature that specifically examines collaboration in PP is somewhat sparse and tends to present narrow and biased theoretical views, mainly core competence theory, TCT and institutional theory (Meehan et al., 2016; Richter & Brühl, 2017). Existing work focuses primarily on savings by consolidation of procurement spends, type of collaboration, and autonomy. Therefore in this study the call of practitioners and researchers for additional research will be answered, especially in the area of SCP, utilising theories which have long been limited in their application to collaboration in PP, more specifically the RBT. This is arguably the most influential theory applied to the general study of critical and vulnerable strategic procurement functions of LAs (Richter & Brühl, 2017). In the PP function there are probably resources which are critical for the LA business organisation and/or scarcely available on the market.

In this section the above-mentioned theories will be explored in relation to the aim and objectives of this study.

2.5.1 Transaction Costs Theory (TCT)

TCT could also serve as one of the fundamental theories for collaboration in local governments in the Netherlands. Current calls for increased public sector efficiency and effectiveness are, however, making procurement practices more and more collaborative. In order to avoid duplication of efforts, there is a strong push for coordination and alignment among humanitarian agencies. Based on these thoughts, academics and policy have promoted the applicability of collaborative procurement. Transactions cost analysis originated from the Nobel laureate economist, Ronald Coase. His paper, 'The nature of the firm' deals with the 'make or buy' question (Coase, 1937). Another Nobel laureate (Williamson, 1985) followed up the question and developed the governance structure: make, buy or hybrid. Current supply chain management originates from these studies. Transaction cost analysis deals with analysing the costs of searching for suppliers, negotiating prices and drawing up and enforcing contracts. A recent and similar opinion from Lingard, Hughes, and Chinyio (1998) categorised TCT as either ex-ante or ex-post. Ex-ante costs include the costs of purchase strategy, tendering, negotiating and writing the contract, while ex-post costs may be incurred during the execution and policing of the contract or when resolving disputes arising from the contracted work.

In 1900, respectable neo-classical economists such as Thorstein Veblen and Alfred Marshall assumed that there were no transaction costs. That was why the relationship between supply and demand was calculated mathematically as Qd = Qs (Salvatore, 1995). In contrast, institutional economists such as Williamson (1975, 1981, 1985) stated that there exists a transaction cost other than the demand-supply relation based prices, such as the issue of framing a contract and selecting entrepreneurs. This is not part of the original tangible cost of the product or service. Nonetheless, it has to be done by buyers or sellers, or both. Also, information asymmetry must be considered. Neo-classical economics considered a zero cost for information. In reality, it is assumed that information has a cost. Indeed, nowadays with e-procurement systems, information has become a direct cost component (Lysons & Farrington, 2006). In the public sector in Europe, for the announcement of public contracts, a national e-procurement system is

used, which is not free. These two issues, transaction cost and information asymmetry (procurement costs) were the establishing blocks of institutional economics (Williamson, 1975). Thus it can be clear that transaction cost economics is part of institutional economics.

Transaction cost economics

Economists have long recognised that ‘resource owners increase productivity through cooperative specialisation’ (Alchian & Demsetz, 1972, p. 777). The conception of optimum utilisation to maximise and optimise output, economising on transaction costs, is crucial for any study of public organisations, especially when financial budgets have been cut at a national level. The dimensions of transactions should be specified and alternative management structures ('governance structures') described, particularly in this research to find evidence to gain savings by collaborative procurement. Also, to find possible short deficiencies to divert to TCT, in existing SCPs. The economisation of transaction costs is achieved by attributing transactions in a distinctive manner to individual procurement structures. The approach in this research is applicable to determine the efficiency boundaries between local government organisations of internal, fragmented procurement transactions.

The TCT of Coase (1937) and Williamson (1970) tries to explain the shift from markets with many smaller organisations to hierarchies dominated by a few large companies. Alternative forms of economic coordination – market-based and private enterprise – in the markets and hierarchies were compared in terms of the difficulties they have in realising different types of transactions (labour, products and financial) in a variety of environments (Salvatore, 1995). This is in contrast with the decentralisation actions of the national government in the Netherlands, where public activities have been assigned to many small local government organisations (380 municipalities without their linked agencies) (VNG, 2015). This can be linked to a plan to merge local government organisations to one organisation per 100,000 inhabitants. However, this merging was not feasible after the elections in 2012, so has been taken off the strategic agenda at many LAs. Hence, the interest question according to the TCT is, if collaboration may be alternative way to reduce transaction costs in executing internal and external procurement activities.

Dynamics affecting cost of procurement

In this literature review, TCT is analysed alongside the improvement in effectiveness and efficiency due to collaborative horizontal procurement. Williamson (1975) applied the transaction cost to the procurement process. Building on Coase (1937) work, he proposed a classification of transaction costs in market costs and hierarchy costs. Market costs involve costs of selection for the supplier, costs of finding target customers for the products of the firm, costs for contract drafting, and approval costs for contract enforcing. In this research, this classification is extended and refined using the later procurement process models of (Van Weele, 2006).

Earlier research by Williamson (1985) made a distinction between ex-ante and ex-post transaction costs. Ex-ante costs include the costs of tendering, negotiating and writing contracts while ex-post costs may be incurred during the execution and policing of contracts or when resolving disputes arising from contracted work. Ex-post costs include direct costs such as the cost of implementing control systems, cost accounting, measuring performance, quality assurance systems and layers of the managerial hierarchy. Ex-post costs may arise from disputes and litigation may also be high. Ex-ante costs were tentatively identified as those incurred in (for example) contractor selection. Later research by Lysons & Farrington, 2006; Van Weele (2005) reformed these statements to procurement process models, as analysed in Chapter 1.

As well as the costs incurred in selling goods and services, the buyer of goods and services also incurs costs at each stage. Together, these involve substantial resources, which are typically dealt with as overheads. On the other hand, internal hierarchy costs correspond to the costs of the entrepreneurial organisations, as defined by (Coase, 1937). These are formed by:

- costs for human resources selection and management;
- costs of control on contracts regarding human resources;
- costs of contract enforcement;
- costs of coordination and information transmission within the firm.

From a shared-service perspective, Janssen et al. (2009); McIvor et al. (2011) showed that, through more structural collaboration, indirect and overhead costs can be saved.

On the other hand, Knol, Janssen, and Sol (2014) argued that decision makers must be aware of the implementation process of the structural collaboration organisation; they also mentioned indirect costs. These can be different between collaboration organisations because they are less uniform than is often thought. As said before, this requires a long-term strategic decision.

TCT and governance structure

Characteristics of the TCT can be used and tailor-designed to occasions related to the governance of services that are or will be concentrated in a collaborative organisation. Minnaar and Vosselman (2009) theorised the impact that a shared service centre has on the governance structure or management control structure of service transactions. The research was executed in opposition to the conceptual model developed by Vosselman (2002). In that model, the concentration of supporting services is linked with the horizontalisation of management control relationships. Based on both studies, the governance structure partly exercises control through market mechanisms (Minnaar & Vosselman, 2009; Vosselman, 2002).

Minnaar and Vosselman (2009) later developed a model with particular attention to underlying transaction cost economics theory. In this model, they referred to the governance structure of supporting activities (services) and to market mechanisms and the customisation of services. They showed that complex customised services might efficiently be performed by a collaborative shared service centre, or decentralised in the business unit itself. Earlier research argued that this depends on the frequency and complexity of the activities in question. It has been argued that a high frequency of complex customised services makes it possible to gain efficiencies and use the capacity needed for the delivery of services ‘in house’, while at the same time advancing from short communication lines. In other words, both economies of scale, an efficient use of capacity, transaction costs, and costs of coordination of these complex services indicate that cyclical complex customised services should be done within the business unit. On the other hand, incidental complex tailored services are more efficiently governed within the existing shared service centre, while centralisation of supporting services makes better use of capacity possible (Janssen & Joha, 2008). The reduction of transactions avoids transaction costs as a result of potential opportunism by an external party (Vosselman, 2002; Williamson, 1985).

Regular routine customised procurement services can also be organised jointly (Albano & Sparro, 2010). Concentration of those activities in a specialised service centre generates economies of scale, while transaction costs are relatively low. For simple customised services, the role of frequency is such that incidental transactions are better governed via the market than via shared service centre. In contrast with their model, in their case study Murray et al. (2008) found the opposite – that business units chose to do a large part of the transactions themselves, whilst the model would imply an internal outsourcing of these transactions to the shared service centre. This is caused by one of the restrictions of the model, which is based on strictly economic reasoning, while traditionally outsourcing has been a feasible alternative for non-core activities. Other gaps in their research were the insufficient attention given to the structural implementation of the change from independent business units to a collaborative-shared service centre and the hindrance from boards' distrust of collaboration (Murray et al., 2008). Therefore, Nollet and Beaulieu (2003) and Schotanus et al. (2010) argue for collaborative arrangements on a voluntary basis, initiated by the operational units. The contrast in their studies is that they focused on joint procurement groups and not on structural procurement collaborations models. Driedonks et al. (2010) observed in their research that policy implementation and governance can prevent reluctance to engage in time-consuming and potentially frustrating inter-professional collaboration. Grant, McKnight, Uruthirapathy, and Brown (2007) state that strategic alignment of the governance structure with that of the parent organisations increases managerial effectiveness, administrative efficiency and adds value to services rendered.

The TCT can be subdivided into transaction costs, asset specificity or human capital specificity – one or both of the parties develops skills or knowledge specific to the buyer-seller relationship – and asymmetrical information distribution (Krueger & McGuire, 2005; Yigitbasioglu, 2010). In this study, public organisations are viewed as governance structures rather than as mere production-distribution entities. Williamson (1981, p. 552) reinvigoration of the transaction cost approach made the material approachable for economic science. According to Williamson, transaction costs can be defined as the 'comparative costs of planning, adapting, and monitoring task completion under alternative governance structures' (Williamson, 1985 p. 38). In other words, the costs of contracting suppliers also depend on the institutions and how they are

organised, besides the contract value resulting of tender. Some local government organisations create more costs for individually contracting firms than others. Also, the management of contracts, varies between the organisations. These costs can also be affected by collaborative procurement models. An efficient and effective operation can have an influence on the level of the costs to society by actually collaborating in these organisations.

TCT in effectiveness of collaborative procurement

The TCT is applicable for the pre-stage, sourcing-stage and contract management stages, which are divided into the tactically and operationally stages of the procurement process (Coulson, 1997; Williamson, 1985). Krueger and McGuire (2005) tested the proposition that large municipalities, in a collaboration group, are more capable of collaborating in the operational stage of the procurement process with suppliers than small municipalities; however, his hypothesis was not proved, as large LAs were not found to be more capable. Whether or not the reduction of transaction costs in the procurement process can be realised by collaboration has not yet been researched.

Lingard et al. (1998) observed that some theorists argue for three stages: search and information costs, bargaining and decision costs, policing and enforcement costs. These stages are generally equivalent to the classification of transaction costs suggested by Van Weele (2006) and Lysons and Farrington (2006) as: search costs, product or service specification costs, contract selection and negotiation costs, supplier selection costs, performance monitoring costs and contract enforcement costs. These are more specific than the two argued for by transaction cost economists, and for the purpose of more detailed analysis can be re-stated as: pre-tendering work, tendering work and post-tendering work. However, the third stage is too broad in that it includes regularly executing activities as well as dispute resolution. It is more useful to separate dispute resolution or claims, especially in the light of contemporary developments in procurement practice specifically designed to avoid claims in the first place. On the other hand, claims or disputes are more about the tender procedure than about performance in the executing phase.

Additionally, Lingard et al. (1998) suggest that transaction costs in the pre-tendering phase and post-tendering phase depend on the level of the information given to the

bidders. They assume in their research a theoretical model where, at the optimum level of information, the total transaction costs in the ex-ante and ex-post stages are on at minimum level for the contract authority. The level of information in the procurement stages will directly influence the bounded rationality, affecting knowledge, perception and awareness of risk from opportunistic behaviour; this in turn influences decisions (Coase, 1937; Williamson, 1985). Lingard et al. (1998) did not empirically test their model; also, the use of several different contractor selection models makes this study less effective. Various authors, such as Eriksson and Westerberg (2011); Lam and Gale (2014); Tella and Virolainen (2005), find evidence in their research that trust and loyalty in the collaborative purchasing group is a condition for cost savings. They showed that suppliers would react to higher prices when organisations are not loyal to each other and are buying outside the framework agreements. Through the lens of transaction costs theory, game theory and behaviour theory, they find evidence that potential cost savings are mainly due to increased negotiating power and economies of scale on the market, which directly affect contract prices. This indicates that the structure and sustainability of relationships contribute to trust and loyalty in the collaboration, which affects the effectiveness of the SCP.

Another source of cost savings is reduced transactions. Through collaborative procurement, individual players can lower their number of individual transactions, which are proportional related to procurement, especially in pre- and sourcing stage activities. This has the same effect as centralisation of purchasing. On the other hand, Tella and Virolainen (2005) simplified in their study that procurement costs should be regarded equally with purchasing price and that there are also other motives behind cooperative purchasing than savings in purchasing costs; especially in this research where the enhanced effectiveness and efficiency of procurement performance will be studied.

Economies of process

The effectiveness of the procurement process includes implementing a shared standard way of operating while contracting suppliers, during the tendering process, and also in the contract management phase (Albano & Sparro, 2010; Faes, Matthyssens, & Vandenbempt, 2000). Faes et al. (2000) found evidence claiming for more coordination by centralisation or collaboration by global purchasing coordination. Synergy

advantages, due to centralisation or collaboration of procurement activities in and with organisations, can lead to competitive advantage and stakeholder value. Also, other researchers such as Dyer (1997); Essig (2000) discuss less administrative work and a decrease in administration duplication, in addition to a reduction of procurement organisation expenses and failures, as procurement synergy advantages.

Economies of process for collaborative procurement and transaction costs mean a reduction of duplicated efforts in several of the procurement process phases such as preparation, tendering and contract management. Additionally, as one specialised unit handles the tendering processes, a standardised operating procedure for suppliers is easier to establish. For the purposes of this research, the procurement process has been split into three stages (Lysons & Farrington, 2006). These are shown in Table 2-3.

Table 2-3 Procurement stages by Lysons & Farrington (2006)

Stage	Description
Pre stage	Developing relationships and selling, including pre-qualification for preferred tender lists, forming alliances, establishing reputations (Lysons & Farrington, 2006).
Sourcing	The process of identifying, selecting and developing suppliers (Lysons & Farrington, 2006).
Contract management	Managing the content of the contract, monitoring performance, ensuring the carrying out of contractual obligations during the contract period. There are two types of dispute resolution after the contract period: agreeing what is owed and recovering what is owed, i.e. bad debts. Claims, enforcement and disputes are the result of the discharge of contractual obligations (Lysons & Farrington, 2006).

The next paragraph will focus on the transaction costs of the pre-stage and sourcing stage.

Process costs of public tenders

Costantino et al. (2012) conducted research into the transaction cost problem in public tenders awarded in EU countries under the lowest price awarding criteria (Union, 2010) suggesting a probable approach for measuring the opportunity to use a pre-qualifying phase to reduce the total cost of purchasing. By presenting a probabilistic model to calculate the total cost of the transaction by evaluating, besides the purchasing price,

they showed that additional costs of purchasing costs are sustained both by the contracting authority and the bidders. By limiting the number of bidders, these additional costs can be saved for the buying and selling side. This trial would be more interesting if they had not assumed that the bidders' quality is comparable and that the costs after tendering related to the various bids do not differ significantly because public contracts are awarded more and more on the Most Economic Advantage Tender (MEAT) criteria instead of simple lowest price (Union, 2010). By awarding on MEAT criteria, bidders can distinguish their bids on value and quality so quality is mostly not comparable. Also, the costs after tendering are often different, mainly due to the difference in the level of professionalism between the procurement organisations (Johansson, 2012; Ye, Shen, Xia, & Li, 2014).

Also Karjalainen (2011) attempted to develop a formula to calculate the savings of the process costs of a centralised procurement project for the public sector. She examined the internal costs for a procurement project in the pre-stage and sourcing stage of the procurement process. Unfortunately, she did not carry out further research in more detailed data into the cost structure and allocation of the central purchasing unit. Other researchers including Celec, Nosari, and Voich Jr. (2003); Singer, Konstantinidis, Roubik, and Beffermann (2009) conducted similar approaches to estimate unit procurement costs. Singer et al. (2009) multiplied the estimated costs of different procedures by the number of times that the state avoids repeating the procedures. Karjalainen (2011) developed the formula for calculating the savings from centralising the pre- and sourcing phase of the procurement process of one product of service category. This formula will be extended in Chapters 4 and applied in further research to analyse and calculate the output that local authorities achieve through collaborative procurement, compared with similar solo procurement. Although the general assumptions that Karjalainen (2011) made were based on professional experience and data from an agency, it would be interesting to research the effects on SCP: if the transaction costs in the pre-stage and sourcing stage can be multiply influenced.

Additional costs of purchasing model

Comparing the formula of Karjalainen (2011) with a somewhat similar opinion from Costantino et al. (2012), it can be concluded that both researchers took into account the cost of bidders in their purchase price models. Costantino et al. (2012) calculated the

cost of the bidding firm in a diverted formula based on the predictable features of the game theory (Krishna, 2009). On the other side, Karjalainen (2011) used earlier work from Schotanus, Telgen, and De Boer (2009), which suggests that it is problematic to analyse these savings because it is often unknown what prices were paid before purchases were jointed and if the contracts were exactly comparable. However, this study focuses on the procurement costs of the contracting authority and the gains made through collaboration. On the other hand, Costantino et al. (2012) modelled a formula per activity for the sourcing phase.

Conversely Costantino et al. (2012) used a probabilistic approach for opening the opportunity to reduce the total cost of the pre-procurement and sourcing stages. Although they based their model on a single case study, the model is a method for cost reduction. Irrespective of how this eventually worked out, there is no question that Costantinto et al.'s understanding of costs in the pre- and sourcing phase is fundamental to understanding the cost structure in the public procurement process (Union, 2010). In their model, they calculated the total cost for the contracting authority and the total social cost, including costs for the supplier. These costs increase in a linear fashion with the researched population (=n) and therefore the model can be diverted and used independently. Although their study was specific to a single procurement process, their method and formula can in principle be used later in Chapter Four of this study, because of the similarity in stages between an individual and collaborative procurement process. Although the quantity in these (sub) stages can be different. 0 provides the adapted form and relevant part of their study. In the next section the contribution of the RBT is explained, in the areas of people, knowledge and IT services.

2.5.2 Resource Based Theory (RBT)

The local government organisations exist to deliver excellent products and services in a cost-effective manner. Therefore the RBT is a fundamental assumption for this research. Local government organisations have to consider the set of resources available to them as the primary driver of their business strategy and determine what can be done using their own resources or what has to be outsourced.

Smith, Vasudevan, and Tanniru (1996 p. 42) have outlined the definition of resource to include 'tangible and intangible resources, as well as the capabilities required to deploy

firm assets'. Additionally Warnier et al. (2013) show that the development of new resources can improve current resources or combining resources together can eventually help to craft a new business model. By collaboration at the local government level, between current tasks and partly new tasks, resources for strategic and tactical managers are important to create value or to lower costs. As reinforced by Kay (1995), successful exploitation of new products or services can be achieved by cooperation and collaboration. On the other hand, Smith, Vasudevan, and Tanniru (1996) showed that organisational learning is a capability that can be considered a strategic resource, which can develop dynamically over time. In this study, local governments have to renew services from the central government. From this view, organisational knowledge must be created and maintained with a shared architecture, whereby sources from existing public organisations can be used (Sitlington & Marshall, 2011; Smith et al., 1996). The RBT provides complementary resources for the procurement function, such as expert centres, specialists, professional staff etc., which enables a better procurement performance (Brewer et al., 2014; Tokman, Glenn Richey, Deitz, & Adams, 2012).

Complementing this, Brewer et al. (2014) confirmed through empirical research the work of McIvor (2009) and found evidence that organisations with weak procurement resources which can be characterised as having low opportunism (Brewer et al., 2014) are willing to outsource their procurement functions. Future researchers may be interested in the inconsistencies in the findings of Brewer et al. (2014) in the overlapping quadrants of weak and strong resources. Organisations have stronger procurement skills inside than potential suppliers, who have no independent interest. Obviously, estimated performance gains from outsourcing procurement activities may not appear. The LAs in this study are mostly willing to 'outsource' procurement to the SCP, because the SCP is a shared service owned by the LAs in the region and also because of the lack of current knowledge of public procurement.

The resource theory encourages companies to look internally, suggesting that value, scarcity or distinctiveness can be gained from effectively utilising resources. Ricardo (1817) started with some essential thoughts of this theory in his book Principles of Political Economy and Taxation. He found evidence that the difference in relative commodity prices between two nations is evidence of their comparative advantage and composes the basis for mutually beneficial trade. A similar opinion is expressed by

Heckscher (1919); Ohlin (1933), who extended this theory on how to explain what determines comparative advantage and to examine the effect of international trade on the earnings of factors of production.

RBT is a theory, which gives an explanation for the strategy and growth of companies from internal availability or scarcity of production (Sanchez & Heene, 2005; Smith et al., 1996). Resource theory assumes that companies need production inputs to provide services and goods. This is not just about natural resources or capital but also the capacity, knowledge and competencies that enable it to produce goods or services and deliver them to customers.

Early research by Penrose (1959), makes a distinction between physical resources (buildings, technology, materials) and human resources. He emphasised that human sources, ergo knowledge, competences and capacity within the company, have a dominant effect on the management team. This influence determines how management react to developments and the existence of resources in their business environment and make decisions (P. Boxall, 2003; P. Boxall & Purcell, 2003). Penrose's viewpoints were later introduced to the field of strategic management by Wernerfelt (1984), who argued that strategic organisational decisions had to be focussed on the application of existing resources, or focusing on securing or developing these unique resources. Similarly, Barney (1991) and Peteraf (1993) viewed the firm as an exclusive package of assets and resources that, if employed in distinctive ways, can create competitive advantage. Resources with the latent ability to generate competitive advantage must have a number of criteria, including value, rarity, imitability and organisation.
Conversely Mosakowski (1993) criticised this theory, arguing that there are no strategic equivalence resources which are scarce or inimitable. The resources also must relate to the organisation to gain value. Barney (1991) commented that resources gain value if they remain appropriate to the business environment of the organisation. The mixture of complementary resources in the supply chain qualifies greater performance and competitive advantage and can make the difference (Tokman et al., 2012; Zacharia, Sanders, & Nix, 2011). From the point of view of LAs, the interesting area is whether SCP can provide the distinction in procurement resources, whereby the LAs have access to rarity and imitability of procurement resources. Are the LAs more capable to meet their challenges in the field of decentralisations of public tasks and the new procurement

political policies issues? Conversely, have the LAs the needed knowledge and capability previously in house or is efficiency obtainable without SCP?

Professional services

This research is conducted in the setting of the public sector, especially local government organisations linked to municipalities. The largest part of internal budgets is related to the cost of organisations and civil servants (House-of-Commons-Communities-and-Local-Government-Committee, 2014). Therefore it is critical in this research to explore if savings, less uncertainty or more value can be gained through collaboration by focusing on how services are performed through the lens of the RBT, besides the efficiency savings (economies of scale) and the additional value of the expert resources in procurement.

Also, Hitt, Bierman, Shimuzu, and Kochhar (2001) found direct and indirect effects of human capital on the performance of professional services organisations. They claimed that resources and strategies interact to achieve positive results. Companies have tangible and intangible resources as they develop and implement strategies. Intangible resources are more likely to produce a competitive advantage as they are often rare and socially complex and therefore difficult to imitate (Barney, 1991; Brewer et al., 2014). This corresponds to what Barney (1991) said about the creation of causal ambiguity. A complementary research by Becerra (2009) shows that intangible factors are less easy to obtain through the market. In his study, he neglected to investigate whether this implies that the intangible resources of public agencies are also employable in other public organisations by collaboration to gain financial savings or add value and what contains the concept value for the LAs.

Aspects of human capital include the education, experience and skills and characteristics of top managers, according to Hill (2005). He argues that selecting, developing and using these aspects creates the most valuable knowledge for a company. Knowledge can be divided into easily transferable knowledge through formal education and 'tacit' or implicit knowledge that is often gained by learning (Tokman et al., 2012). The latter form is common in the routines and social context of a business’s processes and is important for professional skills. This is often unique, difficult, uncertain and not easy to imitate. Activities in which the firm maintains a superior resource position or

capability, mostly their core competence, are likely to be kept in-house. Those activities for which resource position or capability is weak are more suitable for outsourcing. This argument recommends outsourcing non-core or niche business activities to structural collaborative organisations (Brewer et al., 2014).

Convincingly, Sporrong and Kadefors (2014) argued in their research for more competent human resources in the procurement function at municipalities. In their case studies conducted on Swedish municipalities, they demonstrated that the procurement function must move to a more strategic function. They claimed that more resources should be allocated. They found that small municipalities in their case studies did not have access to professional procurement practitioners. On the other hand, there was strong demand for professional procurement expertise and a generation shift in civil servants was needed. One gap in their research is that they did not suggest or only slightly noted opportunities for structural collaboration for those (small) municipalities. This is inconsistent with Murray et al. (2008) and McIvor et al. (2011) who demonstrated that structural collaboration could be a way to allocate professional procurement resources in-house. Both studies were conducted at municipalities.

Through the lens of the RBT and the context of the research, this inconsistency can be explained. According to Amit and Schoemaker (1993), the RBT made a consequent difference between resources non-specific to the organisation and resources which are specifically connected to the organisations – so-called competences. Municipalities are strongly and integrally associated with their products as they are closely related to the politics and citizens they serve. According to Trepte (2004), civil servants have seen procurement as a necessary way of contracting suppliers. Deasy, White, Parfitt, and Ringwald (2014) showed that within single organisations in the public sector, the maturity of the procurement function can be different between departments. Pemer et al. (2014) attribute this phenomenon to culture influences, ‘slept’ in the procurement organisation. This also suggests that less attention has been paid to professional procurement in the case study of Sporrong and Kadefors (2014) on engineers. So there is no need to get access to procurement competence resources through traditional engineers or structural collaboration by those municipalities. As it is underexposed, Sporrong and Kadefors (2014) request a generation shift and movement of the procurement function to a more strategic function (McIvor et al., 2011). This shift is

necessary to conform Barroso (2010) to previously agreed European agreements in the field of sustainability, environment, and savings.

Hartmann, Davies, and Frederiksen (2010) established in their case study that on the one hand, contract teams are influenced by contract documents when establishing transaction relationships with suppliers. Any gaps in these relationships not covered by the contracts have to be addressed as part of an ongoing learning process between the various parties involved. On the other hand, deficiencies, contradictions and disturbances in the transaction relationships form the basis for adjustments of the existing contracts for subsequent transactions. To some extent, contract teams need support in interpreting and adjusting contract documents and building up transactional relationships. Those findings support Driedonks et al. (2010), who shows that creating team structures does not automatically go hand-in-hand with successful empowerment and functional integration. Sourcing teams face some typical challenges related to their boundary-spanning role, heavy dependence on the commitment of internal stakeholders and part-time team member assignments. Managers have a crucial role to fill in enabling and enhancing team performance. Driedonks et al. (2014) showed that rewards and incentives are very important for the performance and motivation of sourcing teams. They conclude that the effects of human capital and resources on performance are both direct and indirect for procurement performance.

The organisation's strategy is to congregate and combine inputs in a way whereby comparative advantage is achieved compared to other companies. Or in an in a different way, for the public sector, to gain more effectiveness and efficiency by optimal use of resources (Brewer et al., 2014; Janssen & Joha, 2008). By continuing to invest in developing the skills of employees, organisations retain the properties as described in the resource-based view. Employing these sources effectively finally results in savings and values.

Many researchers, for example Boschma (2005); Hyvönen, Järvinen, Oulasvirta, and Pellinen (2012); Sartor et al. (2014) have discussed that the necessary production factors for delivering a product or service are not or are insufficiently available within organisations in fragmented or small local government organisations or departments. Others such as Albano and Sparro (2010); Sartor et al. (2014) have argued that other

organisations, departments or agencies who are specialised in these functions can provide this service well. Unfortunately, they neglected to find empirical evidence for their discussion and limited their research to case studies and invited future scientists to provide further empirical research.

Type of resources

Complementary research by Warnier et al. (2013) extended the RBT by distinguishing the contributions of different typologies of resources, mentioned in Table 2-4. While recognising the strategic focus of the RBT, they shifted their focus to reflect other types of resources as well. This differentiation uncovers undervalued resources and leads to new business models. Warnier et al. (2013) distinguished strategic resources, ordinary resources and junk resources. This mapping can be applied to procurement models for measuring the procurement function. Eisenhardt and Martin (2000) focused more on strategic dynamic competences. Also a future study by Sanchez and Heene (2005) focused more on strategic competencies.

The need for procurement resources will be analysed from the point of view of LAs. These organisations may opt for procurement resources to create value beyond their cost, content of execution given their current operations or prices.

Table 2-4 Category of resources (Warnier et al., 2013)

Resources	Description
Strategic resources	These resources are scarce on the market and the productivity is higher than the expected costs. These, often knowledge-based, resources are important for the long-term direction of the organisation (Calantone, Cavusgil, & Zhao, 2002).
Ordinary resources	An ordinary resource is a common resource on the market; these resources are considered as ensuring competitive parity (Warnier et al., 2013). Considered collaboration in the procurement functions to fulfil the need for these resources to result in high performance.
Junk resources	This resource is not popular in organisations or interesting for the market. These resources have the characteristics of full competition in economic science (Bierman et al., 1991).

This indicates that all those three distinctions have motives for outsourcing to an SCP. On the other hand, the demand of the LAs for a type of resource can depend on the scarcity of resources on the market or in-house, costs, niche specialism of resources or organisation strategy of insourcing versus outsourcing. Therefore the contribution of the RBT is considered in explaining the managerial characteristics of SCP.

2.5.3 Synthesis of enablers of collaborative procurement, theories and the research aim and objectives

Table 2-5 shows an overview of enablers of collaborative procurement built upon the research of various scholars and their work reviewed in previous sections. A number of possible theories that could shed some light on the research aim, such as Agency theory, Resource dependence theory and Core competence, emerged from the review. These theories are more deeply focused on the relation and governance between a principal (LAs) and agent (SCP), the buyer-seller relationship, and the interdependency between LAs and SCP. Since LA organisations increasingly perform their activities as management organisations instead of service-production organisations, the core competence has become very one-sided and is less relevant to this study(Bustinza et al., 2010). However, the key theories used in this research are RBT and TCT. These both shed light on possible explanations and understandings for the impact of SCP on efficiency and the effectivity and this is outlined in detail in the following section. Table

2-5 links the enablers of collaborative procurement related to theories and the research objectives of this study.

Table 2-5 Enablers of Collaborative Procurement

Theory Perceived benefit gained by structural collaborative procurement	TCT	RBT	RO1 Add value	RO2 Less uncertainty	RO3 Cost reduction
Access to resources		X	X	X	X
Shared risk		X		X	
Efficiency	X	X			X
Coordination and seamless	X			X	X
Learning		X	X		
Decreased personnel	X	X			X
Improved service		X	X		
Local government can completely focus on their management organisation			X	X	X
Flexibility of services		X		X	
Continuity of services		X		X	

Consequently, parameters have been derived from the two theories which have an influence on the result of a structural purchasing cooperation and provide insight into the research objectives: value, uncertainty, and cost reduction.

Table 2-6 presents a summary of the two theories and an overview of the aspects of collaborative procurement

Table 2-6 Summary of the Theories

Dimensions	TCT	RBT
Key idea	Organisations have to make choices to minimise the transaction costs in the procurement function.	To increase cost-effectiveness through share, reinforce, and extend the resources and capabilities.
Focus	Costs, standardisation an uncertainty.	Costs, value and uncertainty.
Criteria	Resource specificity, frequency, uncertainty, standardise, coordination mechanism.	Valuable, scarce, difficult to imitate and difficult to substitute.
Collaboration	Collaborate, if the collaborative costs are lower than the individual transactions costs. Minimalise the collaboration (transaction) costs.	Collaboration is a way of obtaining access to resources which jointly prevent uncertainty with own resources and provide synergy by collaboration.

The TCT and the RBT provide sufficient core attributes for exploring the research aim of this study. The next section links the power of sources of these two theories and performance indicators to the research objectives and the central aim of this research.

2.5.4 Multi-dimensional approach

To address the research problem, two theoretical lenses are applied contributing to three different strategy dimensions shown in Table 2-5. The dimensions are drawn from the main topic of the research and translated into the research objectives. The philosophy of efficiency and effectiveness constitutes the dominant paradigm of this empirical study, substantiated by these theories. In Table 2-7, the research objectives linked to the theories are shown, which (mostly) clarifies the influence of the theories to the phenomenon of collaboration.

Table 2-7 Objectives Linked to Theories Contributing to Collaborative Procurement

Objectives	Theories contributing to improved collaborative procurement	Main academic contributors selected for this study
Cost reduction	TCT	(Coase, 1937; Costantino et al., 2012; Karjalainen, 2011; Williamson, 1975) (Bals & Turkulainen, 2017; Caers et al., 2009; Eisenhardt, 1985; Fayezi, O'Loughlin, & Zutshi, 2012; McCue & Prier, 2007) (Emerson, 1962; Herlin & Pazirandeh, 2012; Pettigrew, 1990; Pfeffer & Leong, 1977)
Less Uncertainty	RBT TCT	(Emerson, 1962; Länsiluoto, Järvenpää, & Krumwiede, 2013; Malatesta & Smith, 2014)
Add value	RBT	(Bhagat et al., 2010; Chen & Lee, 2009; Ghodeswar & Vaidyanathan, 2008; Harland et al., 2005; Pulles et al., 2014; Quélin & Duhamel, 2003;Teece, 2007; Unland & Kleiner, 1996) (Nesheim & Smith, 2015; Sergeeva & Andreeva, 2015) (Nesheim & Smith, 2015)

Mechanisms to influences costs in (procurement) costs are principally emphasised in the Transaction costs theory. In this research, the procurement costs for LAs in processes, ex-ante and ex-post, are of primary influence through structural collaboration in this research. Although this tactical research area is extended with the reduction of the costs to manage and organise this professional collaboration. The RBT provides insights to limit the uncertainty of the procurement and thus the internal business function, through securing the availability and capability of professional procurement resources. Besides uncertainty, the RBT contributes to values for the LAs. If supposing this dimension contents a broad spectrum of benefits, here it is limited to the source of power and the performance indicator related to the theory. Each of the two theories contributing to the different dimensions will be concisely discussed below.

Table 2-8 TCT Influences in the Research Objectives

Source of power	Key performance Indicator	Objectives
Coordination costs	Affect tender costs	Cost reduction
Transaction risk	Add value in contract management	Less uncertainty
Coordination costs	Affect contract management costs	Cost reduction
Coordination mechanism	Awareness of demands	Cost reduction
Coordination mechanism	Transparency of information	Cost reduction
Bonding mechanism	Explicit goal alignment	Add value
Reduction of business risks	Standardise procurement processes, tender documents and E-procurement systems	Less uncertainty
Agility	Less uncertainty	Less uncertainty

The TCT has a strong relationship with all of the activities of the procurement process (Coase, 1937; Williamson, 1985). Improvements in the procurement process lead among others to cost reduction. Coase (1937) claimed that if the transaction costs are more than the bureaucratic costs, the activity should be organised within the organisation and vice versa. Arnold (1996) claimed that collaborative procurement organisations can fill this gap in the case of a middle level of specificity in which neither the market nor the hierarchy can be preferred on the basis of marginal cost difference. The advantage of collaborative procurement is directly linked to the transaction cost (Arnold, 1996; Tella & Virolainen, 2005). This statement can be explained through the economic awareness that collaboration leads to fewer numbers of transactions and their pre-calculated costs (Tella & Virolainen, 2005). Inopportunely, Tella and Virolainen (2005) did not test their hypotheses empirically. On the other hand, it is interesting that they support more structural collaborative procurement instead of voluntary; this is because the loyalty the parties have to each other in the purchase group affects the savings gained from the collaboration contract.

Civil servants are more and more operating as project leaders and take control in the area of infrastructure works, social health or facilities, therefore an efficient and effectively procurement process (Bals & Turkulainen, 2017) does not have priority. The procurement function is regular, focused on merely executing the tender, instead of a decent procurement process in stages. Hence, sources of power as mentioned in Table 2-8 have been identified out of the TCT which influences the output of the SCP.

On the other hand the transactions costs can be influenced during the collaboration between principals and agents, in this study being municipalities and agencies. Hyvönen et al. (2012) argued that institutional entrepreneurs operate on many institutional levels simultaneously. On the organisational field level, they must find groups of actors with whom they share interests. Conflicts occur in the field of goal conflict between differences in aims and objectives and asymmetry information exchanging between those entrepreneurs, local governments and their agencies. At the strategic level, and in the pre-face of the procurement process, opportunity costs and bureaucratic costs arise (Hyvönen et al., 2012; Johansson, 2012; McCue & Prier, 2007; Meehan et al., 2016). Although the data of the research of (Hyvönen et al., 2012) only comprises solo distance e-interviews, their findings were interesting. Future research in this field would do well to study demand, as it is one of the areas of interest in this study. The TCT in this study is focused on strategy and policy, as well tactic and operational levels between SCP's and LAs.

Table 2-9 RBT Influences in the Research Objectives

Source of power	Key performance Indicator	Objectives
Complementary resources	Data	Add value
	E-procurement system	Add value
	Procurement skills	Add value
	Training	Add value
Capability	Procurement practitioners	Add value
Critical procurement resources	Dependence or independence	Less uncertainty
	Strategic contract terms	Less uncertainty
Information asymmetry	Awareness of the demand	Less uncertainty
	Control over information/Position in the communication flow	Less uncertainty
	Knowledge of the supply market	Less uncertainty
	Transparency of information	Add value
Demand share	Competition/Number of buyers available	Cost reduction
	Total volume or value in the market	Cost reduction
Reputation	Legitimacy	Less uncertainty
	Brand	Add value
	Expertise, resources, and know-how	Add value
	Size	Add value
Knowledge	More professional	Add value
Product development	Add value	Add value

RBT identifies some useful issues for this study, as mentioned in Table 2-9. It has associations with the core competences theory and TCT (McIvor, 2009). In this research, competitive advantages for local government and their agencies come from being able to derive the most value for the least taxpayer money (House-of-Commons-Communities-and-Local-Government-Committee, 2014). This theory explains and contributes availability of complementary resources and professional capabilities for the local governments and their agencies. These resources contain data, e-procurement systems, professional procurement skills, training and procurement practitioners' capability. By having access to these resources through collaboration, the value of the procurement function increases (McIvor et al., 2011; Murray et al., 2008; Sporrong & Kadefors, 2014; Walker et al., 2013). These values result in more professions in the procurement function which eventually gain more sustainability, green procurement, product innovation and economic development in the public environment (Rainville, 2016). There would be no economic advantage, according to the TCT, to organise these

resources individually (De Vries, 2014; House-of-Commons-Communities-and-Local-Government-Committee, 2014). From this perspective, structural collaboration is an interesting alternative.

RBT can explain cost reduction as a motivation for more cooperative behaviour in the non-profit sector. Malatesta and Smith (2014) found in their research that nowadays managers in the public sector base their outsourcing decisions on the RBT rather than just the Transaction Costs Theory (TCT). It seems that managers are driven by fear related to resource scarcity – particularly when organisations are facing extreme budget insufficiencies. Similarly, the theory illuminates the danger of sole sourcing and dependence on oligopoly (market) sources. Collaboration in the public sector can create more balance between separate powers, which can lead to more cost savings for individual local government organisations (Schotanus et al., 2009; Tella & Virolainen, 2005).

2.5.5 Challenge the research aim and objectives

Attention has been given to research on how to quantify the benefits achieved from collaboration. Pohl and Förstl (2011) called in their research for more linking of the performance parameters determined in the procurement strategy of a procurement project, to the measuring of the procurement project instead of simply measuring the financial savings. Also empirical research, particularly in the area of concrete savings as stated by Karjalainen (2011); Nollet et al. (2008), has been limited. Several qualitative and quantitative methods have been applied to explore and explain the current situation and phenomena mentioned above. Nollet and Beaulieu (2005); Walker et al. (2013) call for greater identification of the empirical gains from structural collaborative procurement organisations.

The literature review has not found any concepts to affect the current procurement performance achieved within existing (structural) collaborative organisations for LAs in the Netherlands. Efficiency and effectiveness gains have been mentioned as *ceteris paribus* in line with existing theories, but have not been tested empirically. Therefore, the current literature applies limited improvements for more efficiency and effectiveness for structured (procurement) collaborations. On the other hand, the literature has provided models to adapt, which may transform this study.

The present study will contribute and identify the pros and cons of structural horizontal collaboration in the field of local government. These identifications will be researched relating to potential cost savings and access to resources. This will address the lack of academic literature on structural collaborative procurement in local government.

This evidence may contribute solutions as an alternative amalgamation among municipalities in the Netherlands (Allers & Van Ommeren, 2016). Most of the current fragmented collaborations are not developed on a strategic vision but on fragmented sub-optimal ideas from local regions. Hence, connections to other sub regions are not sufficiently established and the translation of regional vision to implementation has too little clout. This results in collaboration by municipalities and regions with no strategic vision or ambition. Therefore, it would be interesting to research if SCP can lead to more procurement performance (Úbeda et al., 2015) in this jungle of fragmented local government organisations.

The literature on collaborative (public) procurement, which is still being developed, would benefit from more exploratory economic studies. The aim is twofold. On the one hand, this research will attempt to investigate shared arrangements and create a better understanding of these arrangements and the motivations behind them. On the other hand, this research wants to test the use of SCP as a collaborative concept in facilitating organisational defragmentation for collaborative (procurement) services. In the next section will be composed the features which conform the literature, affect the PP of the LAs by SCP, considering the objectives' costs, value and uncertainty.

2.6 Conceptual Framework Development of SCP

After having specified the purpose of this research in the previous section, and related this to the theories, which are the empirical foundation of this work, a theoretical integrated framework can now be developed (Blaikie, 2010, p. 150) in order to be able to answer the stated research objectives.

The integrated framework of the SCP developed in this study should support the determination of the nature of interactions between local government organisations and the agencies that they are (partly) financially responsible for. This section assesses the explanatory value of the framework.

An essential first step is to exam the impact of collaboration concentration and collaboration dimension on procurement performance. First, the core framework will be tested to see if it explains the individual performance of the procurement function from a LA organisation. To adapt the proportional component of the framework to the research aim, the analysis includes several successive steps and a synopsis of the agencies associated with the existing collaboration region. Initially, it will test the effect of the variables on the degree of collaboration and the effectiveness of the collaboration. After that, the impact of the variables on each of the resource elements will be assessed to determine the generalisability. Finally, it will analysis whether interaction effects exist between the variables and the resource elements used to explain the impact of SCP.

Figure 2-6 provides an overview of these individual steps, each of which includes several empirical analyses to determine if the framework is valid and explanatory.

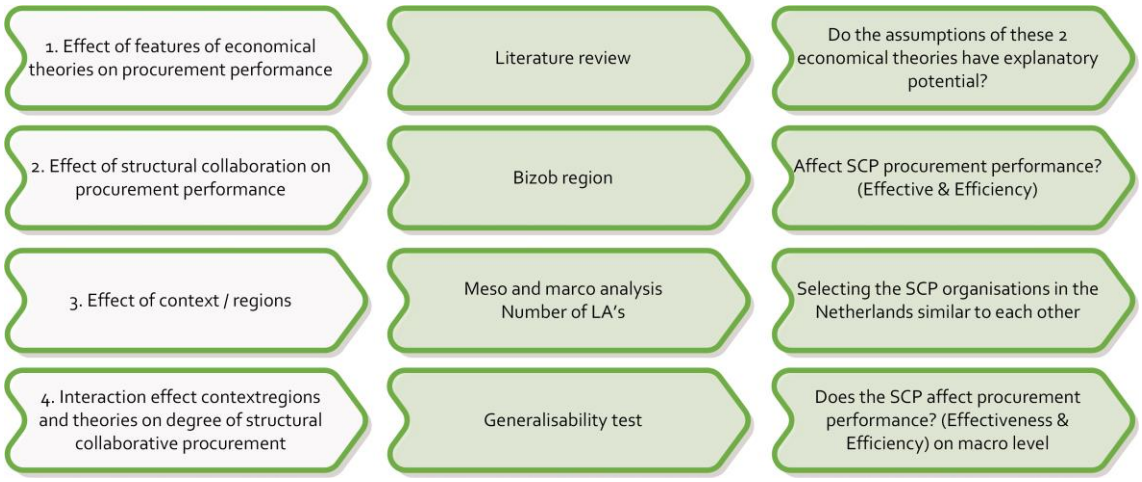


Figure 2-6 Validity and Explanatory Potential of the Collaborative Improvement Framework (Poppelaars, 2009a)

The framework helps to assess systematic, structural collaboration in the public sector among local authorities and agencies. The framework has been translated to the research objectives of this study (Poppelaars, 2009b). These key arguments can be summarised in the model below.

$$SCP = \sum_{r=1}^{N} (TCT + RBT)$$

The legend of the mentioned model:

SCP = degree of structural collaborative procurement.

TCT = the importance of the transaction costs theory to increase procurement performance (more efficiency and/or effectiveness).

⇒ Coordination costs

⇒ Transaction risks

⇒ Procurement risks

⇒ Standardisation

RBT = the importance of the RBT to increase procurement performance (efficient and/or effectiveness).

⇒ Complementary resources

⇒ Capability

⇒ Procurement resources

⇒ Knowledge

The effects of the degree of SCP will highlight the key variables and will be integrated into a conceptual framework in more detail in the forthcoming sections. A first step has been made in Figure 2-7.

The items that influence the power of the SCP have been identified in this section. These items have been connected to the research aim in Figure 2-7 and connected to the paradigm of this study. *Effectiveness* is linked to the performances which SCP affected in the procurement process and contributed to the planned political and business objectives. If a higher aspiration level is achieved through cooperation than described at the individual LA level, higher effectiveness is reflected. The literature and the theoretical insights showed five dimensions which can have an impact on the PP of the LAs in an SCP. Resource sharing & business capabilities affect the availability, skills, training of procurement practitioners, and the E-procurement systems at the LAs. The degree of critical procurement resources, the demand aggregation of strategic contract terms and knowledge of supply markets affect the uncertainty in the procurement

processes. Coordination mechanisms affect the efficacy and lead-time in procurement processes. The agility and flexibility of the procurement function can be influenced by up-to-date procurement information and the exchange of procurement experts. A collaborative approach can affect the transparency and position in the communication flow, leading to more control of information in the procurement processes.

Efficiency relates to the resources that are used to realise a specific activity programme. It establishes a relationship between the expected internal LA procurement costs and the actual costs incurred by the LAs. Dominancy is recognised by executing purchase tenders and contract management. Furthermore, the costs of procurement management and IT systems have been noticed in the literature.

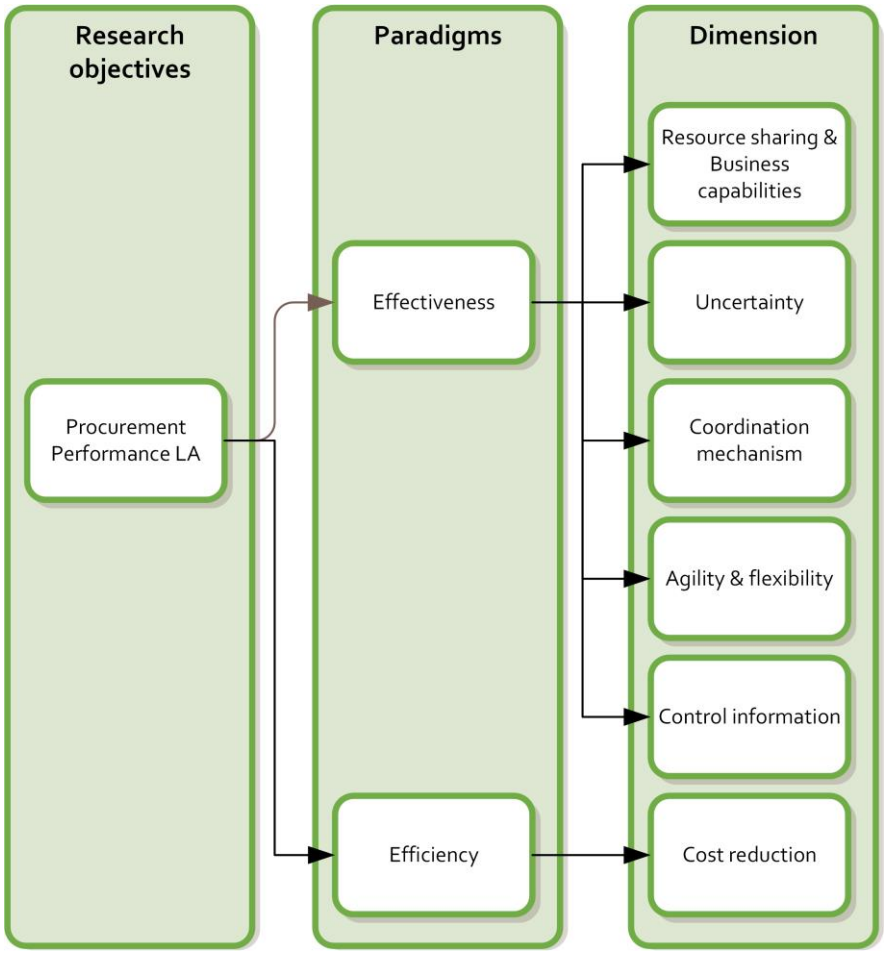


Figure 2-7 Connection Paradigm and Dimensions

Regarding the three mains items of the research aim, the effective measure of the procurement performance is linked to adding value and influence the uncertainty. Cost reduction is primarily addressed to efficiency in the management facets of the procurement function. However, there is no strict measure between those measurements

(Van Weele, 2006). The importance of a PP lies primarily in understanding that in order to be able to assess procurement activities, one must look at both the effectiveness of the procurement cooperation and efficiency.

2.7 Summary

This topic is interesting for several audiences, namely academics and strategic policymakers, board members and politicians. For academics, this research can facilitate access to empirical scientific evidence about efficiency and effectiveness in horizontal collaboration in the public sector, drawing on two theories. For practitioners, this research can show how to improve or optimise current collaborations. Furthermore, for new collaborative initiatives, this research can be used to take into account the lessons of the past. In this chapter, a literature review has been executed and academic journals and books about collaborative procurement, in both the public and private sector, have been discussed and highlights a significant gap in the literature.

Without a doubt, the fragmentation of regional local government organisations has been discussed at length in business magazines (De Vries, 2014) but has had limited treatment in more formal academic publications, such as journals. This research changes that. Van de Laar (2010) discussed collaborative arrangements between municipalities in the Netherlands, but his overview would have been more interesting if the effectiveness and efficiency parameters of the investigated case studies had been measured objectively, especially with the motivations of all of the chosen collaborative models. Schotanus and Telgen (2007) collected academic publications dealing with forms of cooperative purchasing. Their main finding was that most research was not focused on effective and efficient structural collaborative *organisations* but generally on the lead-buying, programme and project approach in joint procurement projects.

The previous literature is therefore mainly focused on volunteer purchase groups, initiated by procurement managers. More attention has also been paid to the direct and short-term gains from collaboration, which may have motivated independent and fragmented organisations to work alone or adopt hybrid forms of collaboration. Although there is extensive work on shared service centres, this has only given superficial attention to the gains to be achieved from collaborative procurement.

Secondly, this research provides new insight by applying an economic and strategic theory lens to collaboration, using procurement datasets of fragmented local government organisations. The value of the work of Proulx et al. (2014) is its identification of the assortment of ways in which non-profit organisations collaborate. According to the authors, the most valuable research question concerns the effectiveness of these collaborations in achieving programme advances and efficiencies; however, their research was solely based on one state in the US.

For practitioners in public procurement, interesting research has been conducted in the field of success parameters concerning collaborative procurement – mainly the advantages of purchase groups, enablers for vertical collaborative procurement etc. Nollet and Beaulieu (2003, 2005); Schotanus et al. (2010). The aim of this study is not to contest these views. Rather, it is this study's intention, in the context of decentralising activities from the national government to the local government and all fragmented agencies, to provide science-based solutions for management to enhance the efficiency and effectiveness of their organisation and their fragmented agencies by using improved, extended or initial, structured collaboration. With the SCP framework mentioned in this chapter, it is possible to measure several structural procurement collaborative organisations in the particular region under study and systematically compare them with other regions in the Netherlands on a conceptual level.

Chapter 3. Methodology

3.1 Introduction

Scientific research does not take place in a vacuum. There is a connection with earlier research, social trends, the interest of the researcher and thinking about how research should be conducted. The researcher should be aware of these concepts, and in the design and implementation of their own research show how it is connected to previous research and developments in methodology. Van Weele (2007) critically argues for more attention in choosing to use a quantitative or qualitative methodology approach by researchers. Why would you use old data from a database rather than conducting case study research at an organisation on your own doorstep? Ramsay (2007) convincingly suggests more qualitative research to complement the existing quantitative approaches in procurement research (Downward & Mearman, 2007; Jick, 1979), on the one side to cover a lack of competent quantitative analyses, and on the other side to have a significant human element and participant opinions and perceptions, which are an integral part of the phenomenon.

The first question that must be addressed is the research philosophy – which ontological assumption fits the researcher. Therefore, based upon the problem statement and the theoretical paradigms applied, it should be made clear which criteria will be used to select the focal organisation of this research and why the study has been set up in the way it has been. In many methodological discussions, ontological assumptions are implicitly considered. On the other hand, studying the theory shows that some of methodological debates within economics and other sciences is just focused on ontological assumptions.

Positivist research has prevailed for years in the field of economics. However there are also researchers who have collected qualitative data and analysed that new data using an interpretative approach. There is now greater demand in procurement science for a colourful pallet of methodological stances (Ramsay, 2007; Van Weele, 2007).

Hence, several primary sources have been researched. The initial phase used 9 interviews. Subsequently, statistical analysis of 30 collaborative public procurement organisations was used to generalise the findings, substantively deepened with fundamental document analysis.

The structure of this chapter is illustrated in Figure 3-1.

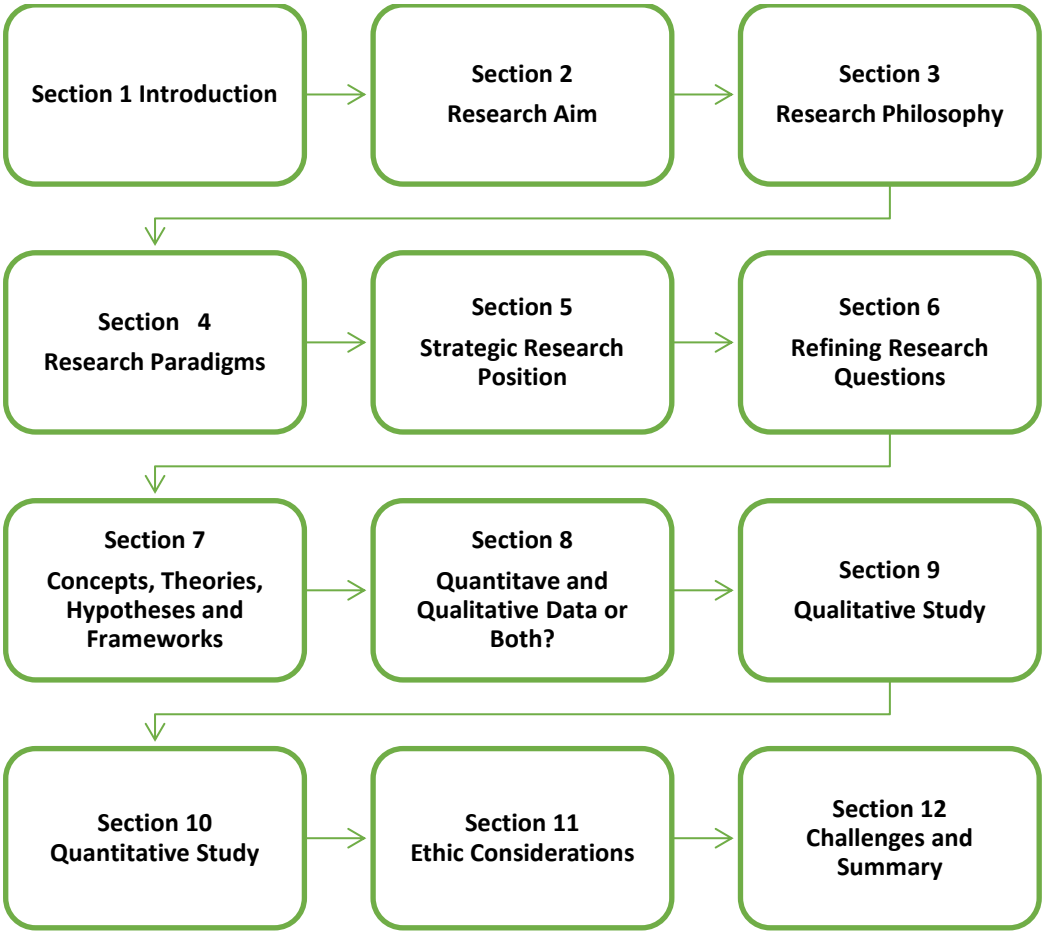


Figure 3-1 Outline Structure of Chapter 3

3.2 Research Aim

The overall research aim of this study is to address the improvement of PP in LAs by the formation of structural collaborative procurement organisations. In the literature review set out in Chapter 2, it can be seen that the literature has discussed the value of economic and strategic theory to improve the efficiency and effectiveness of procurement functions. However there is also a gap in the current academic literature regarding improving procurement performance through structural collaboration. Several academics have highlighted this area for further research or have executed a qualitative

case study to show the advances of shared service centres for collaborative procurement.

In the context of local government and public organisations, procurement performance has received limited academic attention. Meanwhile, in the procurement collaboration between public organisations, the number of purchasing alliances has increased considerably. A recent descriptive investigation by the Ministry of Economic Affairs of the Netherlands (Ministry-of-Economic-Affairs, 2015) measured 46 structural public procurement collaborative organisations in the Netherlands. This significant growth of 256% compared to a previous descriptive investigation in 2011 can be explained by the decentralisation of activities of the central government, implementation of new innovative guidelines, new procurement legislation, and a lack of amalgamation of local governments. For all decentralisation groups of municipalities and their fragmented allied organisations, it is worth researching their choices regarding structural collaborative procurement organisations; how these organisations are performing; (and) how they can improve. Therefore an exploratory and analytical research study in this area is necessary.

3.3 Research Philosophy

Within economics there is an on-going discussion about ontological assumptions and applying research methods. This is not surprising. Similarly, Nancy Cartwright from the London School of Economics has argued that research design in the social sciences leaves much to be desired: "Now what strikes me is that this methodology is crazy" (Cartwright, 1999, p. 324).

What makes this discussion interesting is that within a part of economic science, positivism – more than in other social sciences – has played a central role in thinking about methodology for a long time (Blaug, 1992; Cartwright, 1999; Dow, 1997). So, the methodological justification for the two theories that were discussed in Chapter 2 is found within post-positivism. New methodological developments in economics have long been relatively neglected, especially the ideas and insights that come out of the corner of social realism and the angle of feminist postmodernism (Blaikie, 2010; Frels & Onwuegbuzie, 2013).

3.3.1 Ontological assumption

Ontology is concerned with the nature of ‘reality’. There are two distinct ontological positions: objectivism and subjectivism. Objectivism assumes that social work units exist, detached from social actors. Subjectivism assumes that social phenomena are created by the perceptions and the resulting actions of actors (Blaikie, 2010, pp. 92-95; Collis & Hussey, 2014). Ontological questions are concerned with the practice and nature of the ‘reality’ that is being studied. This raises questions about the assumptions that researchers make about the way the world works and the specific positions they might take (Blaikie, 2010, p. 92).

Collis and Hussey (2014, p. 47) distinguish two views of ontology: objectivism and subjectivism, where “objectivism assumes that social units actually exist independently of the social actors”. In other words, there is one clear reality. Subjectivism, by contrast, “assumes that social phenomena [are] created by the perceptions and the ensuing actions of social actors, because it is socially constructed”. Mercier (2009, p. 214) states that each persons has his or her own individual sense of reality and there are various realities. This is in contrast with how the positivist stream interprets this; as positivists believe that reality is independent of us, they assume that the act of examining reality has no effect on that reality (J. Collis & Hussey, 2014, p. 44).

Blaikie (2007, pp. 12-24) elaborated six types of assumptions, which demand a combination of ontological and epistemological assumptions. These six types of assumptions have been derived from previous literature but supplemented with more recent ideas. It was McCloskey (1983) in his article "The rhetoric of economics" who showed that economics as a science increasingly diverged from developments in methodology and stated that the one-sided focus on these prescriptive kinds of methodologies was not helpful in the dialogue within the economic science (Dow, 1997). Since then, in the economic science, the methodological discussion has broadened significantly with philosophical contributions from critical realism, postmodernism, humanism etc.

3.3.2 The assumptions of the researcher concerning reality

Post-positivism emerged at the beginning of the twentieth century. For post-positivists, the proposition is to know ‘reality’ objectively: in this research the approach taken is

that reality exists and that it is possible to study it objectively. But post-positivists are united in the idea that human knowledge is not based on non-challenging, solid foundations. Scientists have reasons to accept things, often these reasons are decent, but they are not unquestionable. Motivations for accepting certain things can be withdrawn as a result of further research (Marsh & Stoker, 2002, pp. 24-26).

The researcher of this study is able to perceive the 'reality' of his study area objectively and without prejudice but tested with objective participants experts views. The researcher is able to develop new concepts by way of *directional* hypothesis formulation, reviews and theories, which have a universal validity and can be used for explanations and rules for human action. The researcher is like a reflective partner looking critically to see certain situations and is able to objectively analyse relationships and identify changes (improvements). This principle contains the implicit ontological assumption that reality is a concrete structure or a concrete process (J. Collis & Hussey, 2014, p. 49).

In practical business research, especially by specific individual problems, each demand has its own proper 'reality'. For example, a disruption between the contract management department and the source unit of the same local government A may have other causes than in B and may need another approach to research or sharing knowledge can be interpreted in several ways. Due to other elements of inquiry, experience, perception, knowledge claims and different contexts form other assumptions (Creswell, 2003, pp. 5-25). Therefore qualitative research and analysis provides the research objectives to a greater extent, with purpose data integration and warranted assertion (Johnson & Onwuegbuzie, 2004; Van Weele, 2007) and bring the reality to a deeper and real understanding. This is so in this research, in particular the research objectives concerning value and uncertainty. The 'what' objectives precede the 'why' and 'how' questions. First one must explore *what* is going on, before it can be explained *why* organisations behave in this way, before it can be confidently changed.

In this research, the central theme of reality is the improvement of public procurement organisations in the Netherlands through structural internal collaboration. The central research aim focuses on the realities of identical organisations regarding the typology of customers, owners, working areas, outputs (effectiveness) and cost savings (efficiency).

There is no direct dependence on the influence of the inner world of human experiences in action, with the exception of refining variables. The reality of the LAs will be more qualitatively precisely researched, which can be recommended for the quantitative research, to conduct variables which confines to real findings and for triangulation in the discussion section (Blaikie, 2010, p. 218). The core businesses of the collaborative public procurement organisations and the LAs are identical, apart from the fact that they are situated in different regions in the Netherlands.

3.3.3 Epistemological assumption

Epistemology assumptions are concerned with the question of acceptable knowledge in a particular area of study (Blaikie, 2010). According to Collis and Hussey (2014, p. 47), there are two extreme paradigms which articulate this: positivism and interpretivism. Morgan and Smircich (1980) indicate that the positivist paradigm is often used in the natural sciences. In contrast interpretivists argue that it is necessary for the researcher to understand the differences between people in their role as social actors. They also indicate that we interpret the social roles of others in line with our own views. The conventional distinctions between ontology and epistemology disappear; what can be known is inextricably intertwined with the interaction between an articular investigator and an articular object or group (Lincoln & Guba, 2000).

Despite the prevalence of research on SSC and JPGs, there is limited research on SCP for local government, and little of recent date. The several forms of collaboration in local government so frequently mentioned in literature, and most notably in branch business communication magazines, suggest that LAs are collaborating, but in a progression. It makes sense to presume that this leads to savings, more value and less uncertainty, unless this phenomenon occurs in a managerial way. The absence of an instrument to structure these increases in collaboration is perhaps one reason why these hybrid forms of collaboration endure. Furthermore it appears obvious that some collaboration arrangements are not equipped in the most efficient way and are not operating effectively. Probably, the SCP can be a concept to create more understanding in this academic gap.

3.4 Research Paradigms

In academic research, it is essential to describe how social phenomena will be studied in order to understand and explain the phenomenon to the reader. The term 'paradigm' was invented by Kuhn (1962) and refers to the arrangement of philosophical assumptions which are shared by members of a given research community. Paradigms will be described by orientation to the philosophical principles of ontology, epistemology and methodology.

Assumptions of paradigms

This research will be conducted within the post-positivist research paradigm (Collis & Hussey, 2014, p. 49). The core assumptions for this choice will be explained below.

The *ontological assumption* can be found in the 'world' that will be researched. In this research, this can be described as follows:

- The research information is transparently accessible;
- The structural collaborative procurement organisations are acting and operating in a demarcated area, namely the Netherlands. The 'world' for the researched public organisations is similar. They have to operate under the same legalisation, national politics and governance structure. Besides that, in the Netherlands there is a National Procurement Law. This law sets out guidelines for proportionality in procurement. Public collaborative procurement organisations are obliged to apply these guidelines. Therefore, the present researched organisations of this study are seen as singular in executing the procurement processes.
- Local government organisations have no commercial interest in sharing this information, so are objective in providing it.
- The local government organisations for collaborative procurement that will be researched are comparable and are substantially similar.
- To recognise and understand the social phenomena – improving local government organisations in the Netherlands through structural collaborative procurement – social science should objectively measure causal relations between them (Murray, 2009; Pettigrew, 1987). Otherwise other irrational factors, such as behaviour, can disturb the reliability of the research.

- To recognise and understand the social phenomena – improving local government organisations in the Netherlands through structural collaborative procurement – social science should subjectively establish how the LAs understand their world, SCP of LAs in their public sector world, before generalisation.

Table 3.1 provides a summary of the difference in stances (positivism and interpretivism) of this research and the consequences for methods.

Table 3.1: Typology of Assumptions of Two Extreme Paradigms. Adapted from (J. Collis & Hussey, 2014, p. 49)

	Positivism	Interpretivism
	⟷	
Ontological assumption	Reality as a concrete structure The 'world' which will be researched: "The landscape of public procurement for local government in the Netherlands" is transparent, obtainable and accessible for academic research.	Reality as a projection of human imagination. There is no social world. There is no general valid knowledge for an answer to this problem
This research	*It is conceivable that SCP leads to more value, less uncertainty and less procurement costs.*	
Epistemological stance	To obtain valid knowledge of the public procurement function of local government collaborative organisations. Validated data from the local government organisations will be used.	Individual approach to obtain phenomenological insight revelation
This research	*Worldviews relate to the type of mixed methods design. The data will obtained from subjective understanding, experts' perceptions of the LAs, claims on knowledge and specific variables, guiding hypotheses. Therefore will be started with insignificant tendency to interpretivism (how, why research objectives), and followed up with post-positivism (what research objectives).*	
Research methods	Surveys, experiments, historical business analysis founded on documents.	In depth interviews and exploration of pure subjectivity.
This research	***Timing:*** *sequential timing; the strands are implemented in two distinct phases, first qualitative followed up quantitative.* ***Where:*** *mixing during data collection; qualitative results have been build to subsequent collection of quantitative data. and mixing during interpretation.*	

The ontology assumption in this study is that it is conceivable that these sources of power can be influenced by structural collaboration.

The epistemological assumption in this inquiry is founded in the researcher's belief that valid knowledge is observable and can be examined and measured, surrounded by the two theories mentioned above. On the other hand, the distance between the researcher and the research area must be minimised otherwise the single quantitative approach will constrain our beliefs and will not provide valid knowledge or will lead to too many limitations in the results of this inquiry.

3.5 Strategic Research Position

The choice of which research philosophy has implications for the research approach. There are four main strategies: inductive, deductive, retroductive and abductive (Blaikie, 2010, pp. 85-92). Using the inductive way, data will be collected and in response a theory will be developed based on analysis of that data. The deductive strategy uses an existing theory to formulate hypotheses and a method will be developed to test these hypotheses to explain the causal relations between the variables. The retroductive strategy is focused on discovering the structures and mechanisms that are proposed to explain observed regularities. This approach will first start with an inductive or deductive strategy to provide an adequate picture of a regularity that will subsequently be explained in answer to the 'why' objectives. The abductive strategy can be used to gain more inside information regarding the way a group or community lives in daily life. Some underlying mechanisms of the sub-research objectives may require another additional research strategy during the inductive or deductive strategy.

The deductive versus inductive approaches in social scholarship are even today often compared as two equally valid yet irreconcilable strategies related to knowing. The relatively recent trend of mixed methods (Bennet & Braumoeller, 2005; Creswell & Clark, 2011) is an effective attempt to bridge the gap.

This study explicitly advances from the proposition that these two traditions should not be juxtaposed but should complement each other to genuinely contribute to scientific research. That is, clearly identifying, concretising and answering research objectives, rather than following a specific methodology as such, should lie at the heart of social

sciences. In this study, that attempts to establish generalisations independent of setting, the context can not be ignored. Even in social science, deviant business behaviour is often an integral component of activities under study, and as such cannot be discounted. Claims to knowledge thus require full contextualisation and explanation. The stance of the research required reflexivity, by implementing subjectivity from knowledge growth and by observing from another perspective to the problem.

This study relies on testing a concept of SCP in the Netherlands and thus proceeds from a post-positivist perspective. In this way, the concept that has been developed can be explored. It also relies on more interpretative ways of conducting research, both in developing the conceptual framework and in suggesting avenues for future research. In general, this study is firmly based on the assumption that answering research objectives requires a conscious consideration of, and preferably a combination of, several methods, but at a minimum an objective attitude must be brought to the entire collection of existing methods. This study takes a post-positivist approach, using interviews within a case study initially as an exploratory approach which then informs the more generalised quantitative survey.

All in all, this study is grounded in a pluralist philosophy of science that will be reflected in a strategy of mixed methods. Combining methods, qualitative and quantitative, that are used within different ontological and epistemological assumptions, post-positivism and interpretivism, has extended the research, considering that qualitative data and analysis help address the research objective(s) to a greater extent, in particular the research objectives regarding value and uncertainty.

Various academics are charmed by the predictive value of theories attached to positivism. In extreme cases, it can be said that the shape is more important than the content: if the predictive value of a theory is high, the power of the theory and the underlying connections are relatively less important (Dow, 1997; McCloskey, 1983).

The gap between quantitative and qualitative research in public administration and political science reflects an enduring fundamental debate between positivists and hermeneutics (Ramsay, 2007; Van Weele, 2007). Is it better to deduce hypotheses and try to explain and perhaps even predict them, as the logical positivists proclaim, in a

reality based on general patterns of behaviour? Or, is it better to understand the measured features of reality by interpreting them based on theories, and then derive patterns of behaviour from those same features?

In this study the advantages of both schools of thought will be applied. A hybrid model, based on 'the cycle of theory construction and testing' of Wallace (1971) and De Vaus (2002) will be conducted, whereby deductive versus inductive approaches will be combined to connect the unbridgeable approaches. This will provide an explicit link between theory and research. The need for evaluation of theories and observations leads to the use of the bridge between empirical data and rational, logical observations.

An advantage will be that the processes of theory construction and theory testing are seen to occur in this cycle process instead of a never-ending repetition between induction and deduction (De Vaus, 2002; Wallace, 1971). This process can be viewed in Figure 3-2.

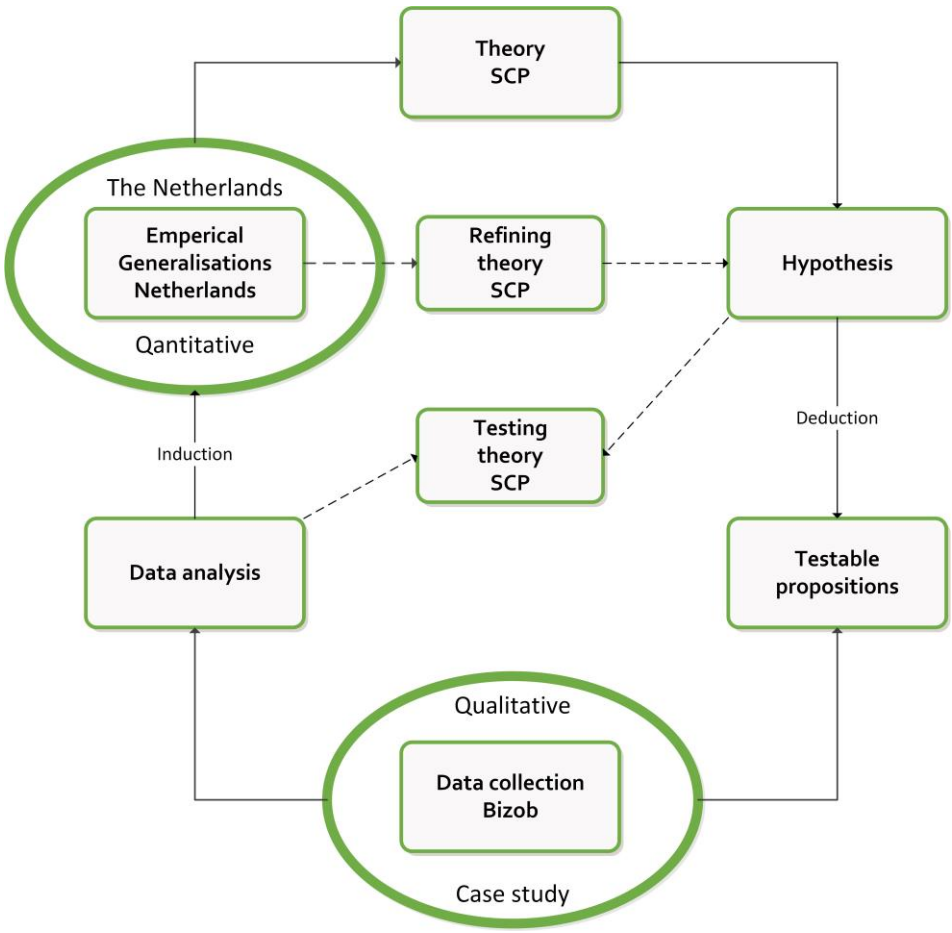


Figure 3-2 Research Process, adapted from De Vaus (2002); Wallace (1971)

This research explicitly proceeds from the proposition that these two traditions should not be juxtaposed but should supplement each other to genuinely contribute to scientific research.

3.6 Refining Research Objectives

The main research objectives are refined further, just to reinforce their direction and context. The sub-objectives are independent and contribute to solving the problem of this research.

1. *To what extent does collaboration lead to **more value** in the internal business processes of the procurement function (RO1)?*

What are value items in the public procurement function for the internal process, which can be affected by structural collaboration? This requires an exploration and description of the value items in public procurement for the internal process, which can be affected by structural collaboration

How can structural collaboration influence value in internal business processes in the Netherlands? This requires an explanation of the phenomenon of collaboration in the public procurement process to value items.

How can these values be affected by structural collaboration in the Netherlands? This requires a *change* between the value items, which can be realised by public procurement in the internal business processes, and the multiplication of value procurement items that accelerates through collaboration.

*2. To what extent does collaboration lead to **less uncertainty** in the procurement function (RO2)?*

What causes uncertainty in the internal business process of the public procurement function? This requires an exploration and description of items of uncertainty in the public procurement for the internal process, which can be affected by structural collaboration.

What effect has structural collaboration on guarantees in the internal business process of the public procurement function in the Netherlands? This requires an *exploration and description* of the actor and multiplier of structural collaboration in the guarantee in the public procurement for the internal process.

*3. To what extent does collaboration lead to **cost reduction** in the procurement function (RO3)?*

What causes cost reduction in the internal business processes of the public procurement function? This requires an exploration and description of cost reduction items in the public procurement for the internal process, which can be affected by structural collaboration.

What effects does structural collaboration have on cost reduction in the internal business process of the public procurement function in the Netherlands? This requires an *exploration and description* of the actor and multiplier of structural collaboration in cost reduction in the public procurement for the internal process.

3.6.1 Grouping research objectives

In Figure 3-3, a breakdown is given of the refined research objectives linked to the concepts of efficiency and effectiveness – the theoretical paradigm of this study (Barnett et al., 2010).

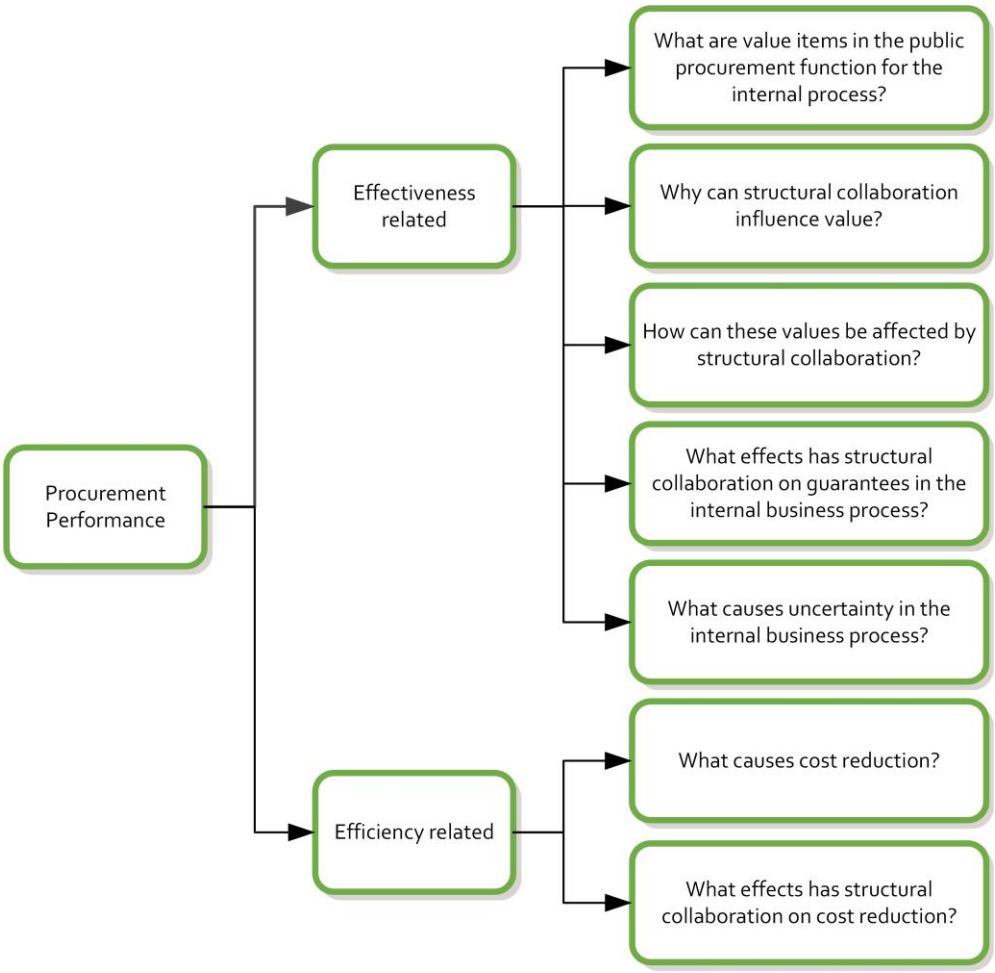


Figure 3-3 Research Objectives Linked to Procurement Performance

3.7 Concepts, Theories, Hypotheses and Framework

Excellent business research is problem-based, meaning that the research approach has to be developed as an answer to the research objectives, which provides a clear understanding of the problem situation. In section 3.5, the deductive and inductive strategies have been explained, which will be used in this research. This section will outline how actor collaboration has been integrated into the procurement performance framework presented in section 2.6.

3.7.1 Pre-development of theoretical conceptual framework

The theoretical framework that will be used in this research is primarily inspired by some neo-institutional economic theories (Williamson, 1975), in particular TCT (Coase, 1937; Williamson, 1985). However, these theories also comprehend from organisational economics and management theories (Donaldson, 1990). In addition, this study has also made use of models of procurement processes and theory to measure procurement

performance (Úbeda et al., 2015; Van Weele, 2006). The research objective focuses (broadly) on two aspects: namely the extent to which structural collaboration of local governments in the Netherlands leads to greater procurement performance (more efficiency and effectiveness) and the processes underlying them.. These aspects are suitable for exploratory, analytical and descriptive research. Based on the literature and the theoretical framework, and following on from Chapter 2 of this research, three hypotheses will be developed in the next section.

Other researchers have recommended future researchers to report these success factors in their studies (Karjalainen, 2011; Pazirandeh & Herlin, 2014). Furthermore a cross-disciplinary approach has been adopted to look at research into other forms of collaborative procurement arrangements in the public and the private sector while considering the characteristics of structural arrangements such as shared service centres (Murray et al., 2008). Most current structural collaborative procurement organisations are founded with the main paradigm of 'doing more with less', focused on the market scale and market aggregation.

3.7.2 Development of a theoretical conceptual framework and hypotheses

Collaboration can be the 'engine' in firm performance. Cao and Zhang (2011) showed that supply chain collaboration has a positive effect on collaborative advantage. Through cooperation, supply chain companions can operate if they are one single company. In Chapter 2 the source of powers, key performance indicators and dimensions of SCP within the theoretical concept framework are analysed. These can be classified as:

- 'what' are the advantages of collaboration?
- 'how' can they add advantages?
- 'what' are the results for the individual performance of the local government organisations?

By extending and transforming the research model of Cao and Zhang (2011) and Van Weele (2006) and adapting the framework of the 'collaboration' component in the research objectives of this study, a conceptual framework can be created, as shown in Figure 3-5 and the impact of collaboration in Figure 3-4.

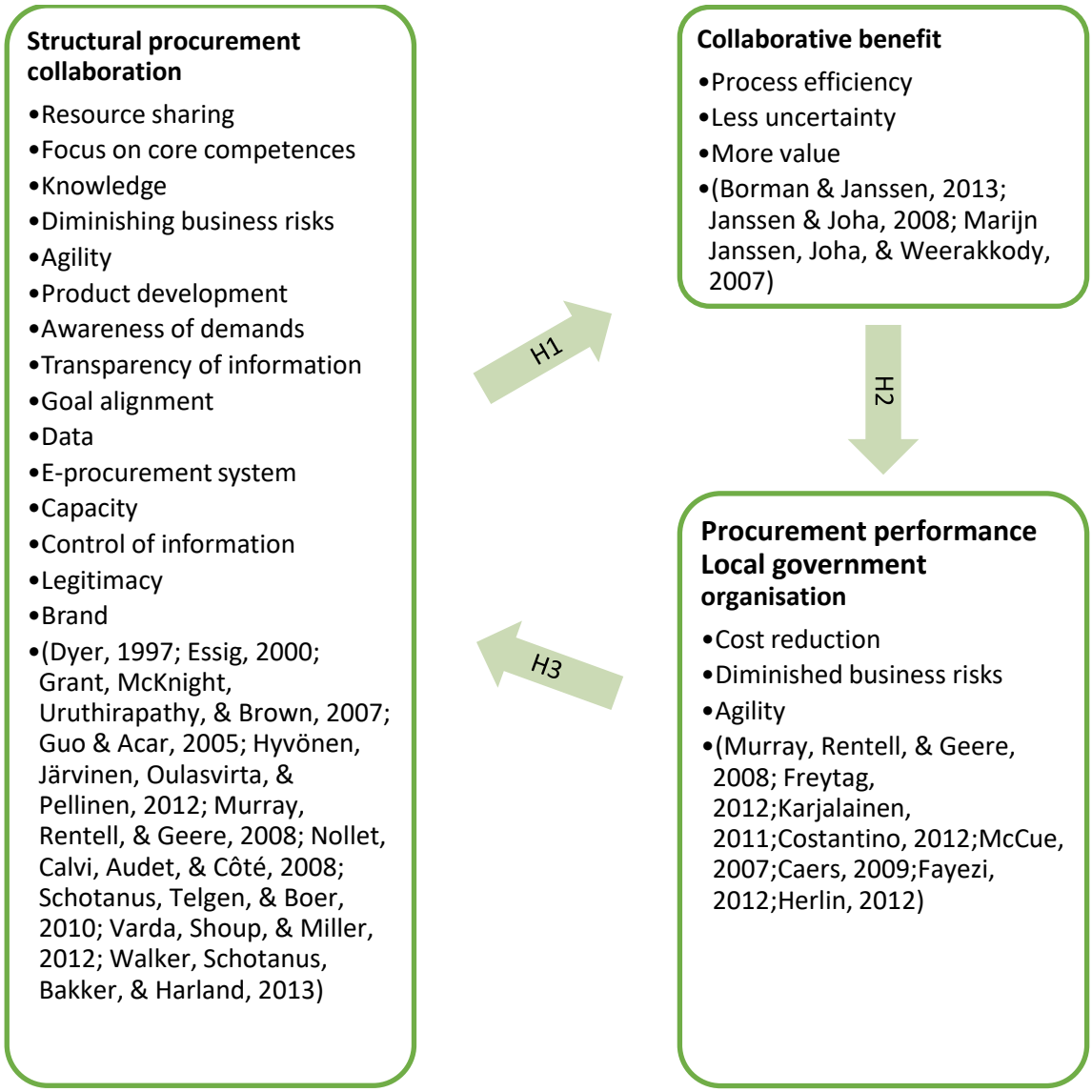


Figure 3-4 Impact of Structural Collaboration Procurement

These hypotheses will be used to secure the academic knowledge by directing for association or causality against empirical evidence in the ontology of this research. Thus the following hypotheses are put forward:

The first hypothesis tests if the structure in the SCP has a positive effect on the collaboration return. Therefore, the first hypothesis for this study can be formulated:

Hypothesis 1

Structural collaborative procurement has a significant positive effect on collaborative benefit.

The essential condition for structural procurement collaboration is that, the members of the collaborative effort are able to increase their total value due to cooperation and provide these benefits from their individual local government organisation. In a short period, LAs can see operational enhancements such as an improvement in productivity (Borman & Janssen, 2013; Janssen et al., 2007). Over a longer period of time, local governments expect more (product) innovation, more access for start-up and SME entrepreneurs to public tenders, more professionalism in staff, fewer legal complaints, shorter cycle time of executing procurement tenders, more value from procurement procedures, less operational business risk and lower costs (McIvor et al., 2011; Pazirandeh & Herlin, 2014). Hence, the second hypothesis for this study can be formulated:

Hypothesis 2

Collaborative benefit has a significant positive effect on the procurement performance of the individual local government organisation.

Procurement collaboration can deliver benefits to all members of the structural collaborative public procurement organisation – for instance, and as mentioned above, higher efficiency and effectiveness. Conversely, collaboration between local government organisations increases additional costs, if not managed well, such as costs of coordination, compromise, inflexibility and doing parts of the procurement function twice. The effect of structural procurement collaboration on collaborative benefits and procurement performance is complex and multi-faceted. Harmonisation between individual local government organisations and the collaborative procurement organisation is an importance issue of this multi-faceted and intricate procurement collaboration. This helps to formulate the third hypothesis of this study:

Hypothesis 3

Coordination between structural collaborative procurement and the individual local government organisation moderates the procurement performance of a local government organisation.

In Figure 3-5 the conceptual framework and the hypotheses are integrated.

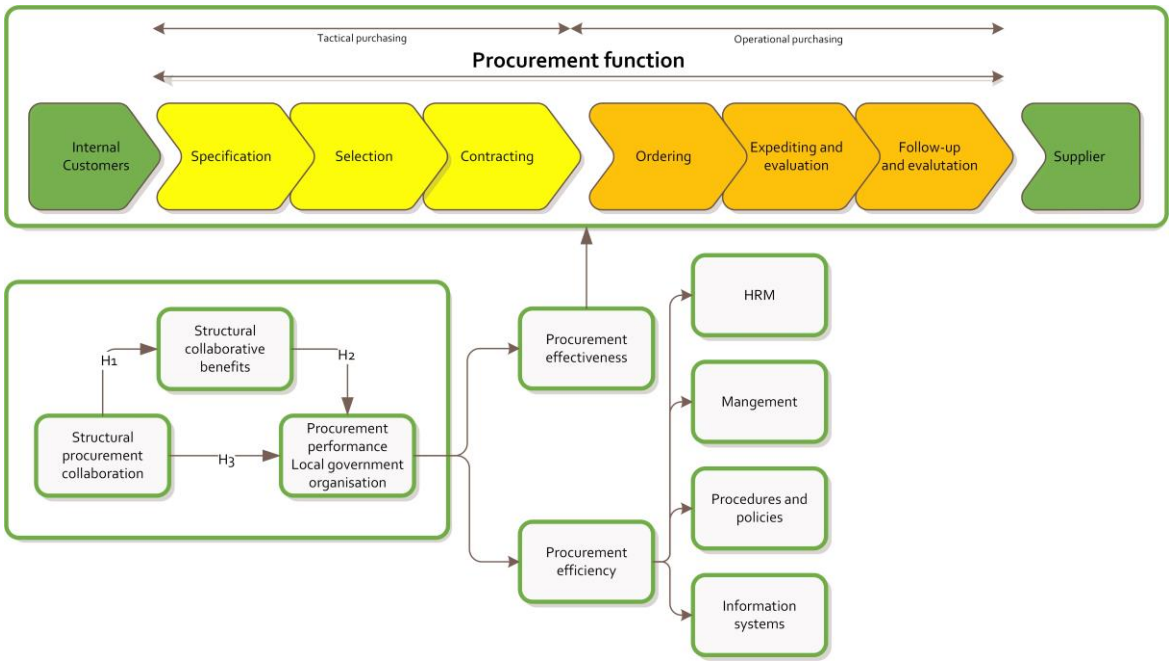


Figure 3-5 Conceptual Framework Procurement Model with Integration of Hypothesis

The next section describes how the data will be gathered to measure the impact of structural collaboration on the research objectives, value, reduced uncertainty and cost reduction, guided by the conceptual framework viewed in Figure 3-5.

3.8 Quantitative or Qualitative Data or Mixed?

'What' objectives can best be covered by quantitative research (Blaikie, 2010), 'Why' and 'How' through qualitative research (Bowen, 2009). This research demands both approaches. The advantage of these combinations is that the power of both types of research is combined, which increases the validity and reliability of the results if applied correctly. Another advantage is that more research or sub-objectives can be addressed.

Design

In this research, the empirical model of Wallace (1971) and De Vaus (2002) will be conducted. Mixed methods will be used, starting with exploratory design (Creswell & Clark, 2011, pp. 143-170) (Venkatesh, Brown, & Bala, 2013). The purposes of this exploratory sequential design will be to first explore in a qualitative manner with a small sample and then to determine if the qualitative findings can be generalised to a large sample (Frels & Onwuegbuzie, 2013).

The research uses a form of cooperative inquiry, which is ontologically based on a belief in an external open and accessible world. In the public sector, information concerning public organisations is obtainable for research (G. J. Murray, 2009). The researcher also has access to professional networks within the public sector. In the first stage, qualitative research is undertaken with individual local government organisations of the Bizob organisation directly to construct measurements; in the second phase, it is carried out indirectly with them through the quantitative research approach.

The purpose of this two-phase, exploratory mixed-methods study will be to explore public organisations' views with the intent of using this information to develop and test an instrument/model with a regional sample in the Netherlands.

Methods

The first phase of this study is a qualitative exploration of what it means if procurement performance can be extended through structural collaboration by collecting interview data from a sample of individuals from these fragmented public organisations to address several disciplines related to each of the theories mentioned above. As there are no extant instruments to assess the efficiency and effectiveness of collaborative procurement performance, an instrument/model needs to be developed based on the qualitative views of the participating organisations. Statements and quotes from these interviews were used to refine the questions to be used in the survey, which could then test the hypotheses. In addition to this initial exploration, the qualitative findings were used to develop measures that could be administered to a larger, more general sample with the objective of explaining and understanding the phenomenon in question (Hesse-Biber, 2015; Venkatesh et al., 2013). The qualitative data from 9 interviews informed the generation of variables regarding factors potentially associated with PP and

structural collaboration. This occurred at refining the variables before the quantitative questionnaire and at the end of the spectrum, in the findings, Chapter Four, where integration involved building the quantitative questionnaire with the qualitative analyses (Fetters, Curry, & Creswell, 2013).

Interpretation and reporting

The purpose will be data consolidation, data comparison, data integration and warranted assertion through several (mixed) analyses (quantitative & qualitative) (Creswell & Clark, 2011, pp. 65-76). Firstly, the quantitative and qualitative findings are synthesised through the narrative approach in the discussion chapter, using weaving. Nonetheless, of the level of interpretation and integration, the quantitative stage represents the dominant strand, regarding the scope of the research into SCP in the Netherlands; it is then extended with the qualitative strand being incorporated to address the purposes of mixing, triangulation, complementarity and expansion ('putting the finger on the sore spot') (Fetters et al., 2013).

3.8.1 Qualitative and quantitative research

The central aim and research objectives of this research contain 'what, why and how' objectives. The 'how' objectives – as in how to improve procurement performance through collaboration – require an open-minded approach to unravel the current operational practice related to the business processes. This will be done within the case study, initially as an exploratory approach.

Due to the complexity of the implementation processes, case study is the most common research method in this field (Yin, 2003). Implementation is viewed as a completed process over time. Many different variables play a role. Part of it, moreover, does not directly influence the cases under study, but it has an indirect effect on them and also influences the outputs. The advantage of the case study approach is that the depth of the research can be increased. However, the disadvantage to this advantage is that within the time that is available for executing the quantitative study, only a limited number of cases can be examined. This brings with it objectives about the extent to which the results of the research are eligible for generalisation, but this will be covered by the quantitative stage of the research.

In the past, implementation research, which has been conducted frequently in the field of change research, has been criticised for the high percentage of studies carried out with case studies as a research method (Goggin, 1986). Bierman et al. (1991, pp. 3-14) argued for a more scientific and systematic approach. Quantitative methods should play a greater role in applied research (Frels & Onwuegbuzie, 2013). However, case studies involve concrete, practical and context-sensitive information; especially viewed from the ontological position of subjectivism, each business organisation is distinctive and forms a different research topic (Blaikie, 2010; Creswell & Clark, 2011). The social scientist stream of subjectivism is convinced that, for the development of social science theory, knowledge can only be obtained through case studies (Frels & Onwuegbuzie, 2013; Yin, 2013). Also, a limited number of cases, if properly selected, can be generalised to a wider range of applications (Yin, 2013). The criticism that case studies can be manipulated by researchers to underscore their own hypotheses is not true, according to Yin (2013). The literature shows that the very opposite is the case. Through an in-depth approach to cases, many researchers have concluded that their findings do not correspond with their own hypotheses (Yin, 2003).

This study opted for a single case study as it will take an exploratory and analytical character in the mixed methods research approach, and will be revisited using a quantitative approach (Creswell & Clark, 2011, pp. 53-106). In total, one case will be investigated. The case study is conducted at the largest and one of the first SCP organisations in the Netherlands (Ministry-of-Economic-Affairs, 2015), called Bizob. The value of collaboration will be defined within the internal business processes. Initially the case study was used to define what the value items in the public procurement function are, and the potential influence of collaboration, derived from the research objectives. These findings will result in accepting or rejecting the hypotheses.

Timing, sequence and building data

The results of the case study were used as a preparation and test for the quantitative stage of the research. The sequence of the data collection is influenced by the outcome of the interviews, which was firstly for preparing the questionnaire; however, the interviews secondly required fundamental research through the document analysis, which justified the additional document analysis to gather hard evidence. The timing of *collection and analysi*s of the two strands occurs in two distinct phases, with the

collection and analysis of one (quantitative) data occurring after the collection and analysis of the other (qualitative) data. In the *discussion* section the two strands are mixed during the final step, drawing a conclusion that reflect what was learned from the combination of results from the two components of the study. The extending of the quantitative strand with the qualitative strand being incorporated to address commitment for mixing, triangulation, complementarity and enlargement on the central phenomena of this study (Bryman, 2016a). Choosing mixed methods strengthens the internal validity of the study (Frels & Onwuegbuzie, 2013; Venkatesh et al., 2013).

In Figure 3-6 the project-planning of the study is viewed.

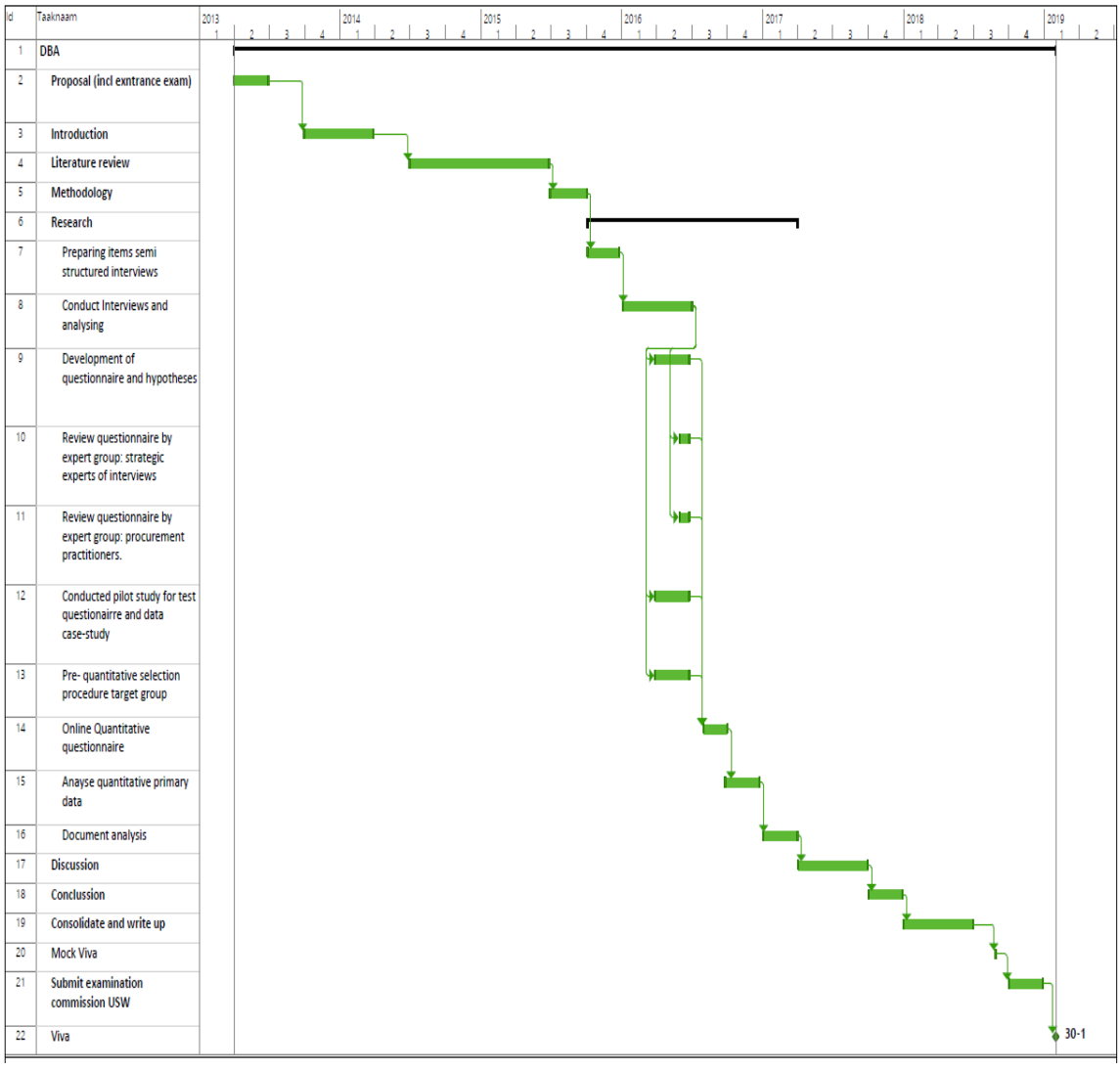


Figure 3-6 Thesis Planning

3.9 Qualitative Study: Data Types, Forms and Sources

In general, documentation, archives, interviews, direct observation and participant observation are common sources for case studies (Yin, 2003). Much more information can be collected first hand using semi-structured interviews with stakeholders, focus groups and participatory observation (Creswell & Clark, 2011, pp. 148-151). In this phase of the research, documents and interviews will be used.

From the extensive reviewed literature in Chapter 2, an initial list of potential items has been compiled. Eleven enablers of collaborative procurement and eight components for gaining collaborative procurement are inventoried. Business documents and financial reports from Bizob will be used to determine survey questions. This initial list will be reviewed and evaluated by practitioners from individual LAs organisations who are members of the Bizob organisations.

Documents can also be used to identify the interpretations and reactions of stakeholders at key moments (Creswell, 2003; Yin, 2003). Subsequently structured interviews will be used to check the relevance and clarity of the questions, assessment, the reliability and validity. Based on the feedback and comments from the experts, redundant and confusing items will be rejected, modified or added. This process of the case study is shown in Figure 3-7.

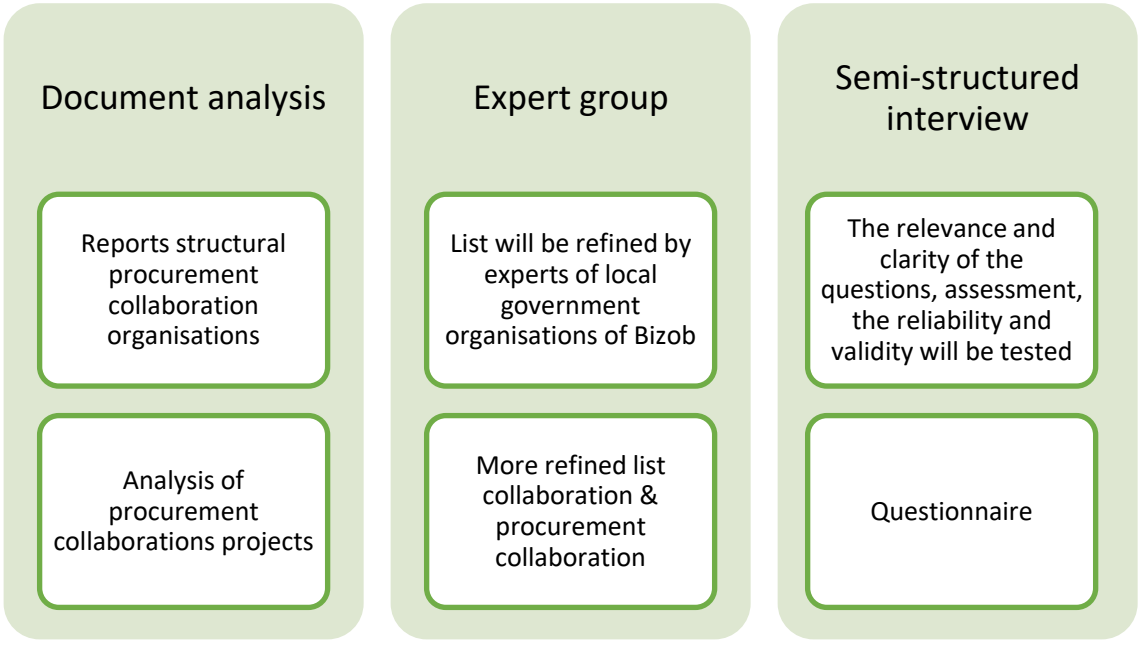


Figure 3-7 Activities and Output of Qualitative Stage of the Research

The primary interest lies in determining which group of factors currently accounts for the largest part of the variance in procurement effectiveness and efficiency, and as a result on which group of factors collaboration should focus to increase the procurement performance of the individual local government organisation. Furthermore, the aim is to identify individual relationships between factors and specific dimensions of enablers of procurement collaboration. Identifying these relationships will provide more insight into how structural collaborative procurement effectiveness is actually affected. These dimensions of procurement performance will be analysed and discussed in the next chapter.

3.9.1 Research set-up

This section describes the first phase – the qualitative part – of the study, which is based on semi-structured interviews with experts who are responsible for the procurement function in their public organisation and documents relating to the case study of local governments in the South-east of Brabant, which are founded in the Bizob organisation. The interviews and document study are conducted to offer the groundwork for the quantitative part but also to compare the findings of both studies. The qualitative research that has been used and its aims are explained, the findings are discussed and the implications for the quantitative primary research instrument are specified. The process of this exploratory study is viewed below in Figure 3-8. This figure shows the different stages in the instrument's development.

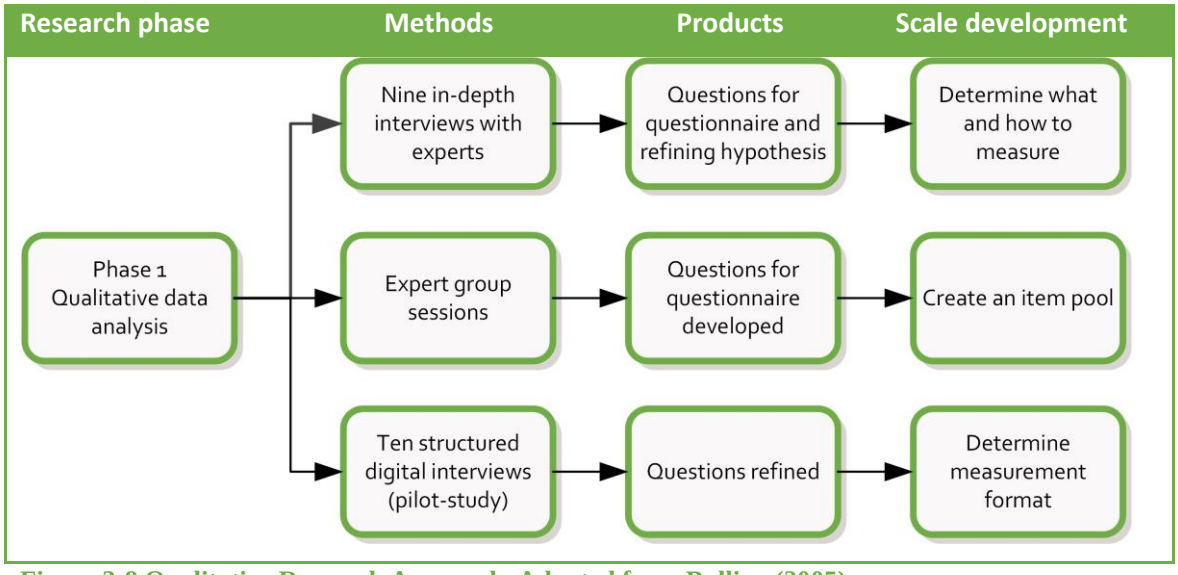


Figure 3-8 Qualitative Research Approach. Adapted from Bulling (2005)

In this research, a qualitative inquiry has been conducted by using a combination of interviews with experts and direct observation of documents relating to the procurement performance function of SCP to begin identifying requirements of SCP approaches to affect their procurement performance. Phase 1 – the qualitative study – has been conducted to gain a deeper understanding of the value of SCP and procurement performance. Besides deeper understanding, this can be needed to refine the hypotheses developed in Chapter 3 for the phase 2 quantitative research.

3.9.2 Case study: local government organisations in Southeast Netherlands

The aim of this inquiry is to study the enablers and disablers which have an effect on the PP of a LA inside a natural population. As an appropriate study of a representative part of the population, a case study would be the preferred method (Yin, 2003). The case study will be used in this study to explore the actual contribution of collaboration to the individual PP of a LA.

One of the advantages of the case study method is that it provides deeper insight into the benefits and disadvantages of PP for a LA. It also shows how these benefits and disadvantages are caused. The disadvantage of a case study, according to the quantitative category of scientists, is that findings are not statistically generalisable. The findings are only valid for that specific organisation, under these circumstances and conditions.

Why has this region been chosen for the case study? This region has been selected for the case study because most of the local governments there participate in SCP and most procurement spending involves SCP. SCPs were among the first organisations in the Netherlands to undertake collaborative procurement and began in 2003. They are known to represent one of the main players in SCP organisations in the Netherlands (Verhagen, 2011). This region is therefore representative and encompasses the issues in which this study is most interested: procurement performance, effects of collaboration, fragmentation, new public tasks and differences in size and structure.

3.9.3 Interviews

In-depth interviews offer the opportunity to capture rich, descriptive data about people's behaviours, attitudes and perceptions, and unfolding complex processes (Creswell &

Clark, 2011, pp. 230-233). In understanding how the concept of SCP performs, as collaboration structure, benefits and the impact of coordination on collaborative output as proposed by (Cao & Zhang, 2011), evidence was gathered through a series of face-to-face interviews with representatives from the management and political functions in the Dutch local government sector. In the explorative part of the research, it was important to obtain knowledge for the purpose of preparing the survey. While interviews take time, they can give you rich, detailed information. From a post-positivist view, interviews must all be conducted in the same way to avoid interviewer bias. Although thorough information was needed in the initial phase, semi-structured interviews were conducted. The semi-structured form allows the interviewer to ask further questions and request clarification. To ensure that each respondent understood the question, in the same way, the interviewees were equally pre-briefed (Collis & Hussey, 2014). Open-ended questions were used to support and stimulate interviewees into voicing opinions, using examples and reflection.

The literature review in Chapter 2 explained that the main strategic players in SCP are general management, financial management in operational business units, and political leaders (mayors etc.). For each of the local government organisations involved, initial contact was made directly with these key persons. Table 3-1 shows the positions of the people interviewed for each of the local governments involved in the study and where in the organisational structure they were positioned. The interviewed LAs are a varied mix of extent: large/small/medium, and geographical position in the Bizob region. The criteria taken into account in the selection process included managerial or political responsibility regarding the procurement function in their organisation.

Table 3-1 Interviewees

	Local authority	Seniority / responsibility	Functional area	Seniority	Date
1.	Municipality Son & Breugel	CEO/ City manager	General manager operations	C	08-01-2016
2.	Municipality Veldhoven	Mayor	Political	D	14-01-2016
3.	Municipality Oirschot	CEO/ City manager	General manager operations	B	14-01-2016
4.	Municipality Oirschot	CFO	Financial control	C	03-02-2016

	Local authority	Seniority / responsibility	Functional area	Seniority	Date
5.	Municipality Deurne	CEO/ City manager	General manager operations	D	18-01-2016
6.	Municipality Uden	CEO/ City manager	General manager operations	D	01-02-2016
7.	Fire/rescue/safety public organisation	CFO	Financial management Financial control	C	19-02-2016
8.	Municipality Oss	CPO	Corporate procurement	D	17-05-2016
9.	Municipality Oss	Procurement manager	Social domain/care	C	17-05-2016
Seniority		A B C D	0 – 1 year 1 – 3 years 3 - 5 years > 5 years		

The semi-structured interviews were held in 2016. Four Chief Executive Officers (CEOs) of municipalities, one mayor of a municipality, one Chief Financial Officer (CFO) of a municipality and one of a regional fire-security agency, one Chief Procurement Officer (CPO) of a municipality and one procurement manager were interviewed. All interviewees had a position within their organisation in which they were responsible for the strategic position and functioning of the procurement function. The exception was the mayor; however, he was administratively responsible to the city council for the realisation of the (procurement) policy goals. Most interviews averaged 100 minutes and were conducted according to the interviewees' schedules and availability at their offices and were selected by mini pre-interviews. The mini pre-interviews were conducted to avoid disinterest or unprepared performance during the main interviews (Ahmed, Qayed, Abdulrahman, Tavares, & Rosenfeld, 2014). The author's personal expertise within the public procurement sector helped to gain access to data. The sensitivity of the information gathered during the study was recognised and the author personally controlled all of the material. All of the information collected during the project has been maintained in a series of protected project files, which included data collected from the case studies. The author personally carried out all of the interview work in order to maintain a consistent approach throughout. An independent transcribing service carried out the transcribing of the taped interviews. Case study work was reviewed on an ongoing basis by the researcher's supervisor in order to ensure that the work carried out met the high academic standards of professionalism demanded at doctoral level.

3.9.4 The content focus of the in-depth interviews

Table 3-2 shows the content focus of the interviews and the link to the research objectives and hypotheses.

Table 3-2 Content Focus Interviews

Qualitative research focus	Subjects for the in-depth interviews	Link to RO
In-depth interviews identify the types of value due to cooperation and gain these benefits. Questions examine how structure can be implemented in collaboration and what the values of structural collaboration are related to procurement.	Access to Expertise /knowledge	Uncertainty
	Access to capacity	Uncertainty
	Access to dedicated personnel to manage the collaborative processes	Uncertainty
	Sharing experiences	Value
	Cross-organisational teams for process design and improvement	Value
	Quality	Value
	Resource sharing	Values/Uncertainty
	Output value products /services of collaborative procurement	Value/Uncertainty
	Procurement human resources	Uncertainty
	Standardisation	Costs
	Cost reduction by cutting budgets	Costs
	Reducing organisational risks	Uncertainty
	Fragmentation in the organisation of Procurement	Costs/Uncertainty
	Resource dependence diminishing	Uncertainty
	Demand share	Costs / Value
	Reputation /Legitimacy	Value
In-depth interviews identify the (positive) effects of SCP for individual local governments. Questions examine the advantages and disadvantages for the operation of local governments.	Resource sharing	Value/Uncertainty
	Transparency of information	Value
	Procurement human resources,	Value/Uncertainty
	Standardisation of procurement process	Costs
	Capabilities	Costs
	Demand share	Value
	Product development	Value
	Transparency of information	Uncertainty
In-depth interviews investigate coordination between members of collaborations and the instruments used to harmonise the individual members towards the common goal. Several collaborations and the inefficiency between these collaborations are studied.	Goal synchronisation	Costs
	Procurement organisation cost	Costs
	Symmetry of information	Uncertainty
	Transparency of information in the collaboration	Costs
	Scope of agency	Costs/Value
	Duplication collaboration	Costs

The semi-structured in-depth interviews were mainly focused on *what* are the variables that affect the performance of the SCP, related to costs, uncertainty, and value; after identification, further investigation will additionally zoom in on the question of *how* they affect it.

3.9.5 Validity

This section sets out the validity of the study in phase 1 – the qualitative investigation. Any qualitative research must be able to withstand rigorous scrutiny to confirm quality. Collis (1995) and other academics developed criteria such as credibility, confirmability, transferability, saturation, meaning-in-context and recurrent patterning for reliable academic interpretivist study. Blaikie (2010, pp. 167-171) broke down validity into two wide classifications – internal and external. Yin (2014, pp. 32-38) recommends five tests, mentioned below, to establish the quality of any empirical social research, especially using case-studies to establish the quality of the research. Qualitative validity comes from the researcher's analytical procedures, based on information gathered during interviews and from document reports. This section will set out the trustworthiness of this qualitative research by applying certain criteria.

Construct validity

In general, in case studies it is essential to ensure that subjective judgments do not influence data collection. Operational measurements have been established to secure the construct validity.

Appendix V shows the characteristics derived from the theories of the literature, further defined and operationalised in dimensions items and collected with key performance indicators and techniques of measuring.

The objective of item generation is to achieve the content validity of constructs by reviewing the literature (chapter 2) and consulting with local government experts. The dimensions are reviewed from the extensive literature, which involves the procurement performance of organisations by collaboration. The data has been analysed by the recursive abstraction method to secure a systematic and rigorous approach.

These characteristics will be discussed with experts of local government organisations. These experts are chief financial officers (CFOs), chief executive officers (CEOs) and one mayor. All of these experts were willing to take part in the expert group. The goal of the expert group was to check the items and theories generated from the literature were relevant to the practical business environment.

Internal validity

Internal validity is the degree to which the researcher can determine that there is a cause and effect correlation among variables. These are accounted for in phase 2, the quantitative investigation of the research. Patterns have been matched as a procedure of testing the SCP theory in the case: local government in the Netherlands. Hypotheses, expected patterns, which are refined by phase 1, will be tested, consists of matching, in the local government in the Netherlands, observed pattern, by measured values and accepted or rejected. Patterns will be matched or not matched.

In phase 1, risks such as participant attrition and the maturation of participants have been accounted for. Participant attrition in the expert group of interviews has occurred. Maturation of participants has not affected the data because of the moment in time the interviews and the strategic position of the participants in their organisation was similar.

External validity

External validity is the scope to which the case study results can be generalised (Bordens & Abott, 2002; Collis & Hussey, 2014). The external validity challenge is a major barrier when conducting case studies. In this study, the post-positivist approach is applied; the case study has been used to refine and deepen the hypotheses and questionnaire. In principle, the two theories that explain the effect of collaboration and the procurement performance on local governments would be the targets to which the results could later be generalised. To secure this generalisation, hypotheses will be tested in phase 2 in accordance with statistical techniques. The SCP theory will be tested by replicating the findings in other regions of the Netherlands through quantitative research (R. K. Yin, 2014, pp. 32-40).

Content validity

Cohen, Philips, and Swerdlik (1996) argue that researchers must validate whether the content of a research object is a representative sample of the universe of the behaviour the test was designed to sample. The scope of the construct is adequately reflected by the items as a group (Dunn, Wellman, & Bevan, 1994). Other research scientists (Collis & Hussey, 2014) mentioned meaning in context, which has similar characteristics. The experts selected for interviews were all responsible for the procurement function of their organisation on a daily basis, as well as on a strategic, tactical and operational level and selected by pre interviews (Ahmed et al., 2014).

Credibility

This aspect was achieved by guaranteeing that the interviewees received a short briefing about the content and subjects of the interview beforehand to obtain depth of understanding. The interviewees were then debriefed on a continual basis after the interviews were held concerning the quantitative approach and findings (Collis & Hussey, 2014, p. 172).

Reliability

Reliability refers to the absence of random errors, in theory ensuring that subsequent researchers would be able to arrive at the same results if they conducted the same research along the same steps again (Collis & Hussey, 2014; Yin, 2014). In this phase of the research, the face-to-face interviews were all tape-recorded. All interviews were systematically transcribed, which reinforced the recurrent patterning to repeat the experiences of sequenced perceptions.

Prevent social desirability bias

The potential interviewees were first asked by email for cooperation. Two people indicated that they had no time or need to participate in the interviews. As a result, a select group remained, who independently and professionally fulfilled their position towards the researcher. In addition, the interviews were also conducted for verification at two CPOs from another region.

The interviews started with revealing the purpose of the interview, preparing the subjects for what was to follow; they, therefore, had the time to prepare their responses such that they were socially more acceptable. The interviewees were prepared with a guide checklist and assured of the fact that there were no right or wrong answers. Limited acceptance or rejection was given while conducting the interviews. Also, similar questions, but in another form, were asked about previous topics. So that interviewees would feel comfortable and not pushed, the interviews took place at the office of the interviewee. Mainly neutral questions were asked, for example: 'What affects the output of joint purchasing?'

Alternative ways to collect information were also used, such as through direct documents analysis and report information. However, careful wording of questions and the assurance of anonymity were key measures. The interviewees were not subordinate or in any way dependent on the researcher, but neutral and objective. None of the interviewed CEOs, CFOs, CPOs or the mayor were involved in the creation of the SCP. Thus they were not biased and had no inside information on the foundation of the SCP. This made it possible for them to give an objective representation of the SCP, which endorsed validity.

3.9.6 Document analysis

Bowen (2009), mentioned that exactness of data should be complemented by zooming in for crucial evidence. On the other hand, Yin (2003) noted the difficult availability and bias, often only focused on a unique business issue, resulting from document analyses. Fortunately, this study had direct access to the required data because the organisation under study belonged to the population. Document analysis was conducted, to gather 'hard' data and to justify some perceptions out of the interviews. The document analysis was used for additional research related to a recently executed procurement project, which had been conducted by existing SCP. The objective of this additional research is to examine evidence of the performance of joint procurement projects.

Validity

This data has been uploaded out of an internal locked IT management system of the Bizob SCP. This IT system is used to gain reports about the input of resources into procurement projects and respective outputs. This system has been occupied with real resources, which were needed to execute the procurement projects. The output has been registered from a system that calculated and assessed the procurement projects that were executed for LAs through the SCP. The data contains procurement projects of facility and health commodities for one LA compared with equality JPGs. The measurement contains the sourcing phase of the joint procurement process. These reports have been reviewed through an external accountant in the context of the annual controlling and reporting cycles of the SCP Bizob to its participating LAs. This IT system is annually controlled by external accountancy on construction with financial system.

3.10 Quantitative Study: Data Types, Forms and Sources

The general aim of a quantitative study is to gather knowledge and experience of professional experts who help to address the research objectives of this study. The digital survey is a form in which objectively a large, well-known group can receive questions and provide responses. A disadvantage of a questionnaire is the long lead-time; on the other hand, it is a reliable way to collect extensive data. A Likert scale was used to provide better responses than to open-ended questions (Bryman, 2016b).

During the quantitative study, factors that predict an effect on the procurement performance of public organisations through structural collaboration were measured. Based on the qualitative pre-stage, a questionnaire was prepared. This questionnaire was sent out in the Netherlands to all LAs which are members of SCP organisations.

3.10.1 Piloting and pre-testing

Yin (2013) suggested conducting a pilot study in a representative case. The main reason for this was to check content validity with the opinions of experts (department managers and chief procurement officers) and feasibility and clarity of questioning. Before conducting the questionnaire, it was tested in two specific case situations – two SCPs. Firstly the expert panel was asked about the phrasing of the questions and variables/items and was invited to sort the questionnaire items into corresponding dimensions of the operation scheme – see Appendix V (Gehlbach, 2015). Secondly ten procurement managers, employed at different organisations, reviewed the questionnaire.

The pilot study, for preparing the document analysis, was executed at LAs in the Southeast region of the Netherlands and is included in Appendix VIII. Straub, Boudreau, and Gefen (2004) found that out of all of the articles published in three widely referenced information system journals over three years, only 19% used either a pre-test or a pilot test. Table 3-3 provides an overview of what is tested.

Table 3-3 Piloting and pre-testing

Activity	Objective Pilot study and pre-testing	Secured
Document analysis	Availability of reliable data out of E-time management system	- Intra-compatible IT system - Annual review by external accountant
Testing questionnaire	Questions operate well Ensuring that the research instrument functions well Adequacy of instructions to respondents How well the questions flow	Internet questionnaire

Besides the questions, the reliability and validity of the scales was also tested for relevance, preventing the use of double-barrelled items, avoiding mismatching item types with desired data and clarity (Gehlbach, 2015). In light of the findings from the pre-test respondents and the feedback from the members of the expert panel and the procurement experts, the questions and the scale were adapted. Comments were:

- some questions could not be understood;
- some questions were too manipulative;
- some questions did not flow well;
- too many questions;
- some questions were eliminated and others added.

The following corrections were applied to the questionnaire as a consequence of the pilot and pre-testing:

- introduction text made more clear and complete;
- order of questions changed and / or bundling of questions;
- underlined the essence of questions;

- clear description of public organisations: Safety services, municipalities, shared service centre, health-care and environment agencies;
- possible (wrong) suggestions changed;
- leave the survey organised based on the two theories, but adapted it to bundle several topics into one question;
- 'never' and 'always' replaced by 'none' and to a 'high degree';
- 'procurement manager' replaced by 'procurement-consultant or operation manager';
- clarified that the answer was about the real situation and not someone's opinion;
- last page of e-questionnaire made more personal.

The following assumptions were applied to increase the response rate:

- an explanation for the respondent's selection for inclusion in the study has been given;
- confidentiality and anonymity guaranteed;
- reminder emails sent two weeks after receipt of questionnaire;
- a short summary of the results will be available for the respondents.

3.10.2 Communication strategy of the questionnaire

As mentioned, the current SCPs in the Netherlands had been taken as a starting population. These SCPs are affecting the procurement performance of their member LAs, mostly municipalities. In advance, the LAs of the 29 registered SCPs in the Netherlands have been requested to participate in a large-scale survey. Twenty-two LAs replied to this email request positively. To improve the response rate (Bryman, 2016b, p. 225), the requests expressly invited the staff of management experts of the LAs who were capable of responding to the questionnaire.

Also, an approachable way of answering was used – a Likert scale. Besides the improvements mentioned before, the following recommendations have also been applied.

Dommeyer and Moriarty (1999) completed in their research two forms of email surveys – attached and embedded. The attached form provides significantly more appearance

than the embedded version, is easier to respond to and therefore attracts a higher response rate. In this study, the survey contains 58 questions/items and has been sent out electronically as an attached large-scale survey. The questionnaire has been specified and described to the respondents. A digital electronic survey software program was used.

3.10.3 Validity

Blaikie (2010, pp. 167-171) broke validity down into two wide classifications – internal and external. Yin (2014, pp. 32-38) recommends four tests to establish the quality of any empirical social research, especially case studies. Qualitative validity comes from the analysis procedures of the researcher based on information gathered during interviews and from the reporting documents. This section will set out how the validity of this quantitative investigation in phase 2 will be secured.

External validity

External validity is the scope to which case study results can be generalised (Bordens & Abott, 2002; Collis & Hussey, 2014). The external validity challenge has always been a major barrier in conducting case studies. In this study, a positivist approach is applied; the case study has been used to refine and deepen the hypotheses and the observed research object. On the other hand, in this case study, the case 'Southeast region of the Netherlands' has been selected for those types of local government regions within which procurement performance has been affected by structural collaboration. In principle, the two theories that affected collaboration and the procurement performance of local government would be the targets to which the results could be generalised. In order to be able to generalise hypotheses have been tested empirically in phase 2. The SCP concept was tested through replication of the findings made in other regions of the Netherlands using quantitative research (Yin, 2014, pp. 32-40). To secure the external validation in this research, the following techniques have been applied:

- inviting 1-3 experts per LA to cover insights into total procurement function;
- only targeting LAs that are members of SCPs (population validity);
- SCP for LAs had been supported and promoted for all the regions in the Netherlands by the Ministry (ecological validity).

Construct validity

The operational measurement has been established to secure the construct validity. In Appendix V and 0, characteristics are derived from the theories of the literature. These are further defined and operationalised into dimensional items and collected with key performance indicators, and measurement techniques. A research-fellow from the Faculty of Computing, Engineering and Science of the University of South Wales controlled the SPSS variables.

The objective of item generation is to achieve the content validity of constructs by reviewing the literature (Chapter 2) and consulting with local government experts. The dimensions have been reviewed from the extensive literature, which involve the procurement performance of organisations through collaboration. For triangulation, manual parallel analysis has also been conducted to test the reliability of the factor analysis.

These characteristics have been discussed with experts from local government organisations. These experts are chief financial officers (CFOs), chief executive officers (CEOs), two chief procurement officers (CPOs) and one mayor. All of these experts have been willing to take part in the expert group. One of the objectives of the expert group was to check the items collected from the literature, with the relevance and clarity of each item of the theories with the practical business environment, also first-hand items where supplementary to the questionnaire.

Internal validity

Internal validity is the degree to which the researcher can determine that there is a cause and effect correlation among variables. These are accounted for in phase 2 – the quantitative investigation of the research. Patterns have been matched as procedures for testing the SCP theory, in this case local government in the Netherlands. Hypotheses (expected patterns), which have been refined in phase 1, will be tested, consists of matching, in the local government in the Netherlands (observed pattern) by measured values and accepted or rejected. Patterns will either match or will not match.

Face validity

Bordens and Abott (2002, p. 125) argue about the value of face validity founded on the consistency of measuring. The data from the interviews has been drawn on the coded text of the main theme of one of the theories into the matrixes in section 2.4. Also, groups of experts have tested the questionnaire in the pilot study, as mentioned in section 3.2. This can been seen as determining whether on the face of it the measure seems to reflect the concept concerned. Bryman (2016b, p. 159) suggested that face validity is an essentially intuitive process. However, the systematic analysis of the data from the interviews and the experienced and academic experts for the expert groups rejected this critique for this research. The survey had been introduced with a clear overview of the purpose and context of the research to improve the appearance validity of the interviewees.

Content validity

Cohen et al. (1996) argue for validity if the content of the research object is a representative sample of the universe of the behaviour the test was designed to sample. The scope of the construct is adequately reflected by the items as a group (Dunn et al., 1994).

Reliability

Variables to measure abstract concepts have been translated from the operational scheme. In the questionnaire, multiple-item scales have been used. Each item/variable is correlated with every other item/variable that relates to construct across the sample and the average inter-item correlation is taken as the index of reliability (Collis & Hussey, 2014, p. 275). To control how consistent the measurement instrument is, the internal reliability has been examined (Straub et al., 2004). For inspection of the internal reliability of multiple-time scales, Cronbach's alpha has been tested in all analyses. An additional test has been executed to check the correlations in the factor analysis of the latent variables. It is also a part of Rietveld and Van Hout (1993) factor analysis procedure, which has been examined in chapter four.

3.11 Ethical Considerations

The researcher of this study has spent many years working in the context of this research topic. In essence, the concept of the reflective partner position relates to the researcher's relationship to what is being studied.

Since 1998, the researcher has been the CEO or interim CEO of several SCPs in the Netherlands. Alongside his regular job, he is a member of the board of NEVI Public (Netherlands Association of Procurement) and a strategic advisor to the board of the Ministry of Economic Affairs regarding the developing of the National Tender Law and the development of the professionalism of the procurement policy for municipalities in the Netherlands (member of the expert team and supervisory committee). He is one of the four co-authors of the Proportionality Guideline.

Griffith (1998) suggests that a person within the group has close information, which can give a less objective picture on the study, topic and data, especially concerning personal attitude and behaviour. Burns, Fenwick, Schmied, and Sheehan (2012) recommend in this situation to balance the position within the middle ground with ethical integrity, authenticity and relationality. On the other hand, the insider perspective questions the capability of researchers to really understand the situation of the business situation they study when they do not have access to intimate insider knowledge (Burns et al., 2012). West, Stewart, Foster, and Usher (2013) are convinced that researchers without some insider knowledge will never come to realise the richness of a phenomenon that can be achieved with insider understanding.

Gaining access to credible knowledge thus requires a researcher to find a balance between 'nearness' and 'remoteness' to avoid what is termed by anthropologists as 'going native' but more of a continuum (West et al., 2013). The researcher in this study is working on several levels of collaborative procurement, namely, regional, national, strategical, policy and organisational. It is thus possible to have a professional stance regarding this topic from several angles (West et al., 2013).

Blaikie (2010, pp. 50-55) suggests three fundamental views which a researcher can assume: outside expert, inside learner and reflective partner. The general question –

improvement of the public procurement function by structural collaboration – will be founded on theories. From that view in this research, the stance of the researcher can be characterised as ‘reflective partner’. Also, detachment is required for producing reliable and consistent knowledge that can be generalised. Here the social background and motivations of individuals will not be explored but rather the rational performances of collaborative local government organisations.

As the researcher of the present study works as a professional in this area, he will always have access to several interpretations of the researched reality. Based on his knowledge and experiences, he can make choices about the several intervention possibilities. In this manner, interpretations can be focused to make grounded choices. The researcher’s own knowledge of this field is relevant. Moreover, it is necessary in the practical situation to precisely understand the extent to which this knowledge provides explanation, in order to implement interventions and also to judge the individual characteristics of the situation. On the other hand, the researcher must be aware of conscientisation: identifying contradictions and taking action against oppressive elements of reality (Blaikie, 2010, p. 52).

In addition to these considerations, the researcher has profiled his position and standpoint as a scientific research student at the University of South Wales.

This research has been conducted in line with the six key principles of ethical research that the ESRC expects to be addressed.

1. The research will be *designed, reviewed and undertaken* to ensure *integrity* and *quality*.

2. The supervisors of this doctoral research will be *informed consistently and periodically* on the objectives, methods and techniques that will be used. Special arrangements for restricting the circulation of the research during the process will be made. Also, potential participants will be fully informed by the introduction to the survey or interview if recording equipment will be used. An internet software package for conducting and analysing electronic surveys will support the surveys and mathematical analysis of them. This will contribute to

consistency and ensure the integrity and quality of the research. The research will use appropriate means of data collection. Conclusions will be drawn from techniques that reflect current professional knowledge on validation, reduction of bias, standardisation, design etc.

3. The *confidentiality* of information supplied by research subjects and the anonymity of respondents will be respected. The participants in the study will remain anonymous in the surveys. Statistical analysis of the findings will be carried out using software, which should reduce defaults and secure anonymity.

4. Research participants participate in a *voluntary way*, free from coercion. This will be guaranteed by the possibility that participants can withdraw at any time if they choose. If they do not like participating in the survey, they simply 'click off' or 'away' from the software. The research participant will be informed about any foreseeable consequences of declining if applicable.

5. *Harm* to research participants will be avoided or not be applicable. Because the surveys will have a business and economic character, the research guarantees the absence of harm to the research participants. Participants will be communicated with in their 'mother tongue' language. The research participants will be protected from any adverse consequences from declining to participate where the researcher holds a position of authority relative to them.

6. The *independence* of the research will be a crucial matter, and any conflicts of interest or partiality will be explicit. The researcher will always be sensitive to the potential harmful effects of other contacts on their work and on those persons with whom they deal. An academic conflict of interest could occur if an individual interferes with the peer-review process for some type of intangible personal gain. In this research, the doctoral student has no personal interest, in order to strengthen his or her own chances for publication or funding.

Only appropriate means of data collection have been used. Probability has been reflected to the 'real world' of Public Procurement in Local Government in the Netherlands. Care was taken to store data securely and confidentially, in accordance

with the Data Protection Act 1998. The data were fairly and lawfully processed, processed for limited purposes, accurate, not kept longer than necessary, secured and not transferred to countries without adequate protection. The conclusions related to contributions to science and practice were drawn up from techniques, which reflect current professional knowledge and practice.

In the public sector, in principle, data is transparent and public. In the Netherlands, there exists a Freedom of Information Act 1991. According to this law, the government has a legal obligation to provide information through an approved publication scheme and in response to requests. Nevertheless, the researcher has to use the information exclusively for his research and never transfer this to third-party or commercial organisations.

In this research, data relating to government administrations were used. These data are not confidential or personal in character. However, the information was used exclusively for this research and therefore was not be multiplied or divulged. Questionnaires and interviews were conducted anonymously to treat with respect and to protect the respondents. This includes the findings and publication of the research.

3.12 Challenges and Summary

A challenge for conducting the research was to focus on the main three research objectives in the quantitative phase. Collaboration is a complex topic to explore in full. The questionnaire was at first too extensive and too technically formulated because many research variables were chosen. Fortunately, the interviews, the pilot study, and the expert group made it possible to funnel the information. Another challenge was ensuring that the response rate was high enough. After the first email, only 58% had responded. After a reminder email was sent out, the response rate increased to a response of all the invited LAs, which covered 30 SCPs in the Netherlands. The advance announcement played an important role in obtaining this high response rate.

Besides the explorative character of the interviews, they provided very rich data and directions. The daily business position of the researcher did not conflict with the face-to-face interviewees; they were partly selected for that reason, as they had no direct hierarchic relation with the researcher.

The document analysis offered interesting findings, which were maybe already thought to be known, but produced slight differences. The challenge was also here to demarcate. It was always tempting to look a little further than the key objectives.

Chapter 3 has set out the methodology of this research, which is the bridge between the topic of the research in the form of the significance of the study and research objectives, the literature review and the research being conducted in the 'real' world (the local public landscape in the Netherlands). In this chapter, the connection between the three philosophies of ontology, epistemology and axiology has been shown. Understanding and choosing a philosophy is an important step in planning and carrying out research. This chapter is summarised in three subjects as shown in Figure 3-9.

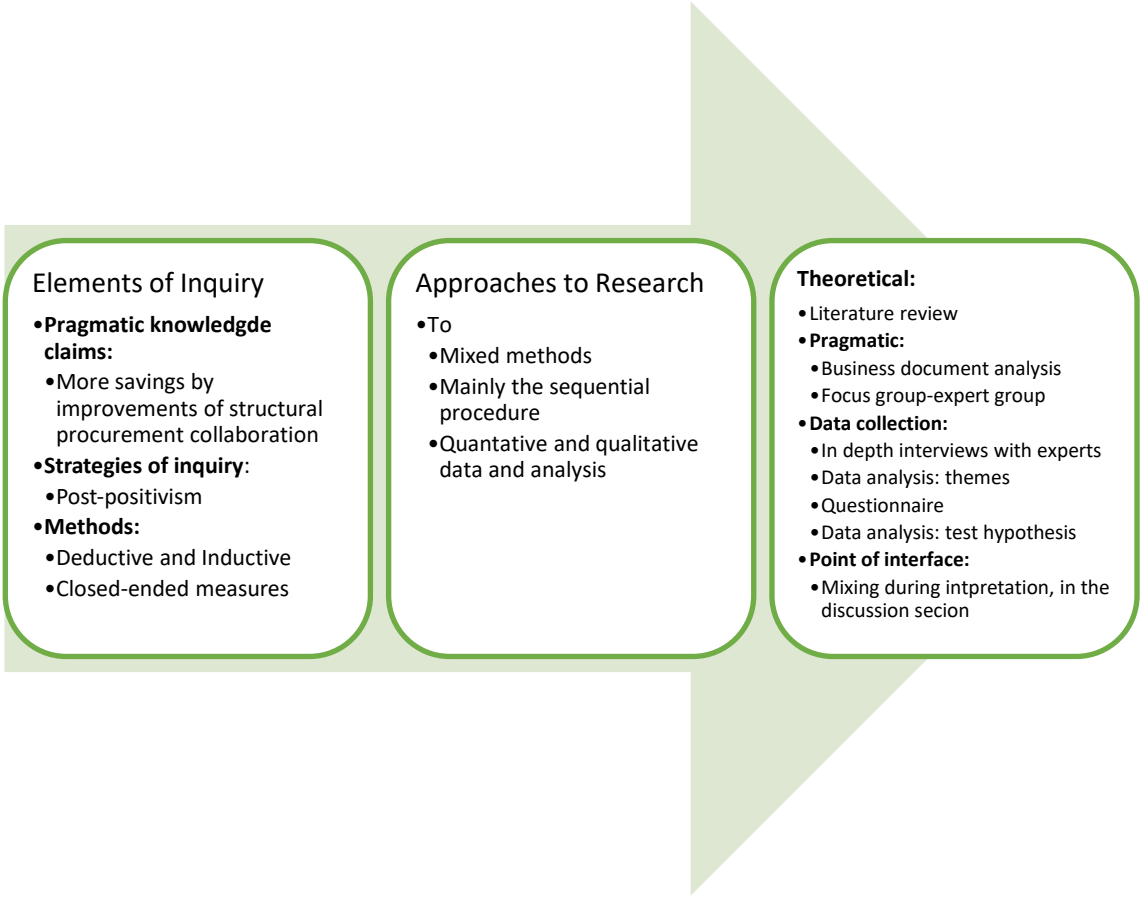


Figure 3-9 Summary of Research Process

Chapter 4. Findings

4.1 Introduction

This chapter will outline the approaches to data collection and present the findings. The data originates from several sources and methods. Qualitative and quantitative data has been collected in this research. Bryman (2016b, p. 627) mentioned the difference between quantitative and qualitative research; the difference between ontological approaches, behaviour versus meaning, is in his opinion a reproduction of that tension. Savage, Bagnall, and Longhurst (2001) conducted qualitative in-depth interviews in their research and found interesting data about class identity and non-awareness, which in their opinion could never have been found using quantitative research because of the non-awareness of their own situation in this sociological research environment. Qualitative researchers are convinced that a Likert attitude scale does not provide access to meanings. Payne and Grew (2005) recommend a more mixed study approach whereby qualitative research can be deeper than quantitative research. Surridge (2007) advocates for quantitative research, especially when it concerns large-scale surveys, with an explanatory objective.

In this research, although LAs are subject to strict rules and accountability from the region and national government (Ministry-of-Economic-Affairs, 2016), LAs are generally similar in terms of their environment, objectives and governance and face the same challenges. In this part of Chapter 4, phase II at the very least has tried to address meanings. The exploratory sequential design involves the collection of qualitative data before gathering quantitative data.

Janssen et al. (2009) suggested that LAs consider their business processes as individual and unique because they have progressed over time and have been tailored to fit their specific business situation. Faes et al. (2000); Meehan et al. (2016); Walker et al. (2013) proposed a higher level of abstraction in their studies, where business processes are often relatively similar, and only really vary with regard to a limited number of aspects. The leading distinctions have to be in line with the different types of demands and the sequence of activities. Although politicians at a central level determine most

demands, every LA has its own, local demands. For example, a request for constructing sewerage can be demanded by one or more LAs. As far as demands determined at a central level are concerned, they may be different in terms of their technology and implementation but they have the same general objective and often involve similar business processes. This means that there are similarities of behaviours between the responses of the LAs in the quantitative phase of the data collection, which is interesting for the explanation part of this inquiry. Besides that, data from quantitative research behaviours is interesting given the national scope of this business research.

The assumption of SCP is intended to improve the procurement performance of individual LAs across the following headline scopes:

- Efficiency
- Effectiveness
- Economy
- Value

These extents are likely to be valued differently by diverse constituents. In practice, we might expect a more complicated picture of the performance of SCP across a range of performance dimensions (Boyne, 2003) due to potential differences between inputs (e.g. cost) and outputs (efficiency) and the experience, satisfaction and perception of quality from citizens. Other aspects will be more important for this research, such as the measured quality of outputs such as professionalism of procurement services and the quantity of outputs such as the number of procurement projects performed, and the efficiency by ratio of outputs, number of measured procurement projects to financials costs, inputs. Besides, value for money by costs per LA for IT procurement systems and the LA satisfaction of their SCP (Boyne, 2003).

The structure of this chapter is illustrated in Figure 4-1.

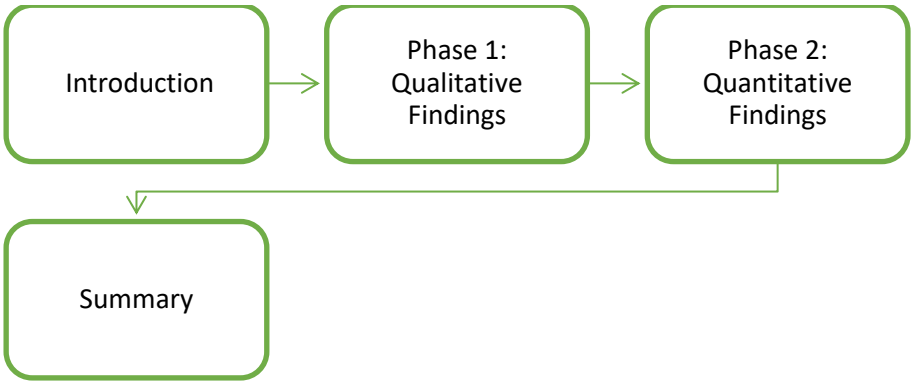


Figure 4-1 Outline Structure of Chapter 4

4.1.1 Overview

In the qualitative approach, variables/items and key performance indicators have been identified through interviews. These were then used to develop a questionnaire. Once the key indicators were recognised in the qualitative element, a quantitative approach was used to utilise statistical techniques to generalise the behaviour on a national level. Creswell and Clark (2011, pp. 68-104) described this method as 'dominant – less dominant' design. In this study, a dominant-less dominant design was applied with the emphasis being on the quantitative instrument (structural questionnaire) over the qualitative semi-structured interviews.

A theoretical foundation such as SCP can be used to achieve more value for local governments. Phase II of this chapter outlines the exploratory design of this model, sourced by the two theories, which respect this theoretical finding in the 'real world' of local government organisations in the Netherlands. Items that have affected the procurement performance of LAs, which are deducted from existing theories, will be refined through the interviews and tested at the LAs who are members of an SCP.

In Appendix V, advantages and characters are derived from the theories of the literature, further defined, coded and operationalised in dimensions, variables/items and collected with a survey, in 0 and Appendix IX. The objective of item generation is to achieve the content validity of constructs by reviewing the literature (Chapter 2) and consulting with local government experts.

4.2 In-depth and Semi-Structured Interviews

The basic set of questions developed for the interview protocol are given below; they illustrate the themes and subjects of Table 3-2.

1. **What were the strategical motivations for participating in an SCP?**
2. **Do you think that participating in an SCP has resulted in any specific organisational outcome?**
3. **What sort of outcomes does your LA achieve through the SCP (H2)?**
4. **How do these outcomes affect your organisation?**
5. **To what extent do they affect the certainty or vulnerability of your procurement processes?**
6. **Which of the procurement performance outputs does your LA attain most? e.g., costs reduction, less uncertainty, value, citizen satisfaction, innovation.**
7. **Do you think that several collaborative tasks can become more efficient in the future (H3) and how?**
8. **To what extent does procurement play a role in achieving the results (success) of implemented policies?**
9. **Have you experienced any professional change in your organisation in recent years with SCP?**
10. **What effects has structural collaboration had on the guarantee in the internal business process?**
11. **What have been the results of structural collaboration for cost reduction in your organisation?**
12. **Does the structure have a significant positive effect on collaborative benefit(H1)?**
13. **Does coordination with a SCP moderate the procurement performance of a local government organisation(H3)?**

During the nine interviews undertaken, the words ‘continuity’, ‘too small organisation’, and ‘too difficult profession’ were seen as key objectives of using SCP. An overwhelming majority of interviewees (9 of 9) across all LAs and public agencies used terms such as ‘efficiency’, ‘cost saving’ or ‘measurable’ to describe why their

organisation decided to use SCP. The primary qualitative findings are included in the Appendix IV and in the following sections, under the themes of RBT and TCT.

In the next sub-paragraphs, the two main themes analysed in 'thematic analysis' are presented (Braun & Clarke, 2006; Guest, MacQueen, & Nameney, 2012). As well as the seven interviews with the CEOs/CFOs and mayor, two CPOs were interviewed to verify whether or not there were any gaps or contradictions with the other interviewees (Baker & Edwards, 2012, pp. 197-219; Bryman, 2016b, pp. 197-219).

4.2.1 Thematic Analysis of the semi structured in-depth interviews

Themes and characteristics were drawn out of the literature and identified the theoretical framework SCP. The interviews provided data about the phenomenon in question, SCP, and helped to refine the quantitative phase.

To analyse interviews, the process of refining and identifying characteristics in the initial exploratory phase is mostly open, tentative and repetitive, with many relevant keywords in the margin of the text themes. These themes are taken from the literature review and are visible below.

Resource sharing, resource dependence diminishing, information asymmetry, demand share, reputation, goal synchronisation, transparency of information, procurement organisation costs reduction, minimising of procurement management costs, procurement information costs, procurement human resources, procurement process, standardisation, value, and capabilities

Each theme has been deduced from the theories and analysed from the literature. The themes in the margin indicate different subjects and what has been said about them. The themes based on theory and field knowledge were previously derived from the literature or are new keywords. In addition, each theme has been read from the perspective of the respondent: what it contributes, in addition to the subjects. Thus the underlined descriptive thematic coded text, in Appendix IV, from the transcripts provides the raw material for analysis (Bryman, 2016b, pp. 584-589) for the descriptive themes.

As indicated above, this process is repeated nine times, since subsequent themes, or those from other respondents, are able to make a point, which had previously not yet been recognised. This process produced a large number of keywords. Therefore the researcher managed the link between keywords and material themes to keep track of the compare keywords in the same themes with each other and the keywords, organising and grouping around the subjects, which is affecting PP with effort of SCP. These (sub) analytic themes are presented in the matrixes and brief snippets from the data transcripts are placed into the appropriate cell in Appendix VI. The researcher looked for similarities and differences of content, outcomes, and context within and between the descriptive themes, as well as for new interpretative explanations between each of the two theories. Replication is one of the most common criteria for establishing whether a pattern within a data set warrants being measured as a theme, though replication must be relevant to the investigation's research objectives. The next two sections present the thematic analyses of the theories to compile the answers from an analytic view.

4.2.2 Generating analytic themes of Resource-Based Theory

In this phase of the research, the characterised features of this theory have been explored in the Bizob case study. These features of the RBT were part of the interviews, constructed on the operational schedule shown in Appendix V.

The dominant theoretical proposition of the RBT is drawn from the theory for the strategy and growth organisations and suggests that collaborative organisations are able to provide knowledge/experts, limit vulnerably/capacity, and gain more social value, recapped in the dimension resources sharing (Brewer et al., 2014).

To what extent can the LA produce what it needs to fulfil its operations without conceding effectiveness? Similarly, to what extent is reliance on their SCP necessary for LAs to achieve their goals? All of the interviewees stated that their "*LAs have direct access to professional procurement knowledge"* (9 of the interviewees). Seven of the nine interviewees mentioned "*these resources as critical, which were scarce and new on the public sector employment market" (7* of the interviewees*).* Also, the steadiness of resources, which an SCP can provide, is decent for the continuity of LAs and makes them less vulnerable to this expertise.

On the other hand, concentration in the SCP was not accused of negatively affecting separate LAs' access to critical resources. Interviewees mentioned that the intensity of expertise and resources in an SCP would increase by extending the LA. "*The combination of decentralised procurement expertise of the SCP at the location has been noticed as being conditional to connect the local demands of LAs"* (8 of the interviewees).

In contrast, one interviewee mentioned "*the direction of his LA in recent years towards less dependence on the SCP and a change to more procurement expertise in-house as basic skills of civil servants"* (1 of the interviewees*)*. The motivation for this movement was the overcapacity of civil servant resources in his LA and a reduction of their budgets.

Also, "*the concentration of buying power in monopolistic commodity markets"* (9 of the interviewees) is mentioned by the interviewees, which they attribute to the arrangement of the JPG of the SCP. So taking account of SME markets is a condition

In theory, SCPs possessing the necessary resources are in a powerful position whereas LAs depending on others for resources are vulnerable to control.

In a world according to RBT, managerial strategy starts with understanding the nature of the LAs' dependence on the procurement function. Thus, a manager applying RBT principles to strategic choices will ask the following types of questions: SCP can be seen as an activity, which takes place outside of an LAs control, and is considered part of the environment of the SCP region. Looked at in this way, the atmosphere is likely to consist of many other LAs in a particular region – a system of interdependencies. The theory emphasises three features of the atmosphere: concentration, munificence, and interconnectedness. Concentration refers to the degree to which authority and power are dispersed within a setting. Munificence refers to the scarcity of critical resources and the willingness within SCP to share. Interconnectedness refers to the degree to which organisations are linked regarding overall collaboration and governance in their region. These three characteristics operate together to determine the resource contribution of an LA in their SCP and with their external atmosphere.

The abovementioned dominant theoretical proposition of this theory in this research is drawn from the theory for the strategy for the performance of the procurement function of the LAs, suggesting that collaborative organisations are able to assure the critical resources for their existence, development and to avoid uncertainty. The dimension of resources sharing is divided into the themes mentioned in Appendix VI.

Access to expertise/knowledge

In the interviews, there was a general consensus about the theme of access to expertise/knowledge through SCP. The CEOs of smaller LAs with fewer than 40,000 inhabitants indicated that "*their civil servants had general skills and no procurement expertise"* (5 of the interviewees). Two of them emphasised that "*at the start of the implementation of SCP, access to expertise/knowledge was the most important consideration*" (2 of the interviewees).

Access to capacity

All of the interviewees found "*continuity of procurement expertise of the SCP important*" (9 of the interviewees). The continuity of the unchanged procurement expert(s) resources is also an important aspect for LAs. Too often, swift changes of procurement resources are experienced, leading to confusion and a lack of clarity for the LA, which leads to additional changeover costs. The relationship between the procurement expert(s) of the SCP and has been found to be important. Remarkably, *"one interviewee now used the procurement expert capacity of SCP less and used its in-house civil servant capacity more"* (1 of the interviewees). Another LA found *"the agility of the SCP important compared with the bureaucratic public shared service centre*" (1 of the interviewees).

Access to dedicated personnel to manage collaborative processes

The collaborative procurement project has to be managed by professionals, as exemplified by all of the interviewees. On the other hand, "*one of the interviewees had experienced lead times that were too long, too many meetings, too much correspondence and a sluggish process"* (1 of the interviewees).

Sharing experiences

The interviewees found it very interesting to share their practices with other regional LAs regarding European tendering. One of the interviewees found *"sharing experiences to be a natural task of a network organisation"* (1 of the interviewees), such as Bizob. On the other hand, one of the interviewees was *"disappointed in the sharing of experiences between SCP experts and the civil servants of the LA"* (1 of the interviewees). The SCP experts execute procurement processes in an organised and professional way; this structured and qualified manner has been limited to the working attitude of the civil servants of the LA. Most of the interviewees also remarked upon *"the added value of professionalism in the procurement processes due to collaborative procurement projects"* (9 of the interviewees).

Cross organisational teams for process design and improvement

To improve processes or to design new product/services concepts, teams with different functions can be meaningful. *A few interviewees mentioned "the efficiency of executing a pilot first before rolling out to LAs"* (2 of the interviewees).

Quality

Quality refers to the extent to which LAs with the colleague LAs in their region and their SCP offer quality products, services and infrastructure works, which creates higher value for citizens. Some have argued that companies can respond faster to LAs and thus to citizens with high-quality products, infrastructure works and innovative designs and processes. Also, an excellent after-sales service supposedly builds customer loyalty. All of the interviewees confirmed that *"SCP brought more quality to the procurement function of LAs than beforehand"* (9 of the interviewees). Two of them also confirmed *"better quality in output-realised projects through the SCP than without it"* (2 of the interviewees).

Resource sharing

Resource sharing was explored in the interviews in relation to the process of leveraging capabilities within LAs in the SCP. Two smaller LAs (located in the same sub-region) mentioned "*restricted sharing of technical expertise with each other and the LA, fire*

and security agencies, and have shared technical expertise with other homogenous fire and security agencies" (2 of the interviewees).

Resource dependence diminishing

To what extent can the LA produce what it needs to fulfil its operations without conceding effectiveness? Similarly, to what extent is reliance on their SCP necessary for LAs to achieve their goals? All of the interviewees stated that *"their LAs have direct access to professional procurement knowledge"* (9 of the interviewees). Seven of the nine interviewees mentioned these resources as *"critical, which were scarce and new on the public sector employment market"* (7 of the interviewees). Also, the steadiness of resources, which an SCP can provide, is decent for the continuity of LAs and makes them less vulnerable to this expertise.

On the other hand, concentration in the SCP was not accused of negatively affecting separate LAs' access to critical resources. Interviewees mentioned that *"the intensity of expertise and resources in an SCP would increase by extending the LA"* (9 of the interviewees*). "The combination of decentralised procurement expertise of the SCP at the location has been noticed as being conditional to connect the local demands of LAs"* (9 of the interviewees).

In contrast, one interviewee *mentioned "the direction of his LA in recent years towards less dependence on the SCP and a change to more procurement expertise in-house as basic skills of civil servants"* (1 of the interviewees). The motivation for this movement was the overcapacity of civil servant resources in his LA and a reduction of their budgets.

Also, *"the concentration of buying power in monopolistic commodity markets"* (8 of the interviewees) is mentioned by the interviewees, which they attribute to the arrangement of the JPG of the SCP. So taking account of SME markets is a condition.

Resource information asymmetry

Information asymmetry may occur where the SCP has additional or better knowledge than the individual LA in relation to procurement transactions. All of the interviewees

mentioned "*gathering or buying information and the procurement plans of individual LAs as tasks of the SCP as well as the SCP's awareness of the LAs" consolidated procurement demands'* (9 of the interviewees). Also, "*the central and structural communication function of the SCP"* (9 of the interviewees) has been seen as a 'unique selling point'. One interviewee mentioned "*the reciprocated control and independence in the procurement process between civil servants and procurement experts from the SCP in procurement projects for his LA"* (1 of the interviewees); he described this as access to new information. Another interviewee could not give hard evidence on this point for his LA but his expectations were positive. Five of the nine interviewees were convinced that "*LAs had become dependent on IT procurement systems for structural and consistent procurement information for their LA from the SCP"* (5 of the interviewees).

Demand share

All of the interviewed executives are convinced that *"the buying power aggregated in the SCP makes the individual LAs stronger in monopolistic or oligopolistic markets"* (9 of the interviewees). They feel that this has led to lower costs and less uncertainty. The consolidation of the demands of the LAs also leads to the dependence of the SCP on the demands of the LAs, although this is not negative. Without the volume of the LAs, the SCP has no legitimisation. The executives did not recognise this phenomenon.

Reputation/Legitimacy

The interviewees recognised legitimacy as an important dimension for their LAs, although this has been advanced over the years. In order to gain support from important external actors from European and national legal forces, the SCP appointed influential developments from the environment and integrated the LAs into the expertise and leadership structures of the SCP. By offsetting external opposition through collaboration, the SCP boosted its practicability and legitimacy. The external performers mentioned by most of the interviewees were *"innovation, more access for SMEs to public tenders, integration of social shelters and the extension of legislation concerning the public procurement sector"* (7 of the interviewees).

Three of the interviewees noted *"the perceived niche vision of the SCP on public procurement as a confirmation to their council and stakeholders which enhance the procurement firm performance and ties similarly confer legitimacy and status to his or her domestic organisation"* (3 of the interviewees).

Reducing organisational risks

One of the interviewees mentioned *"the loss of core activities; being leveraged by SCP; the loss of strategic flexibility; suffering interruptions to supply; and receiving poor quality supply"* (1 of the interviewees). These tactical and strategic procurement issues are critical to their core competences. He also believes that organisations using SCP risk losing vital knowledge, especially in relation to core competences.

Conversely, other interviewees were convinced of the fact that *"their critical procurement function is more secure in an SCP governed by LAs"* (5 of the interviewees). Besides securing this function, they felt that procurement failures and legal claims were also diminished.

Product development/innovation / Output value products of collaborative procurement products

All of the interviewees stated that SCP offered LAs sustainable procurement, which can be disaggregated to green procurement and social considerations. The coordination and stimulating role of the SCP between the LAs was recognised as a contribution; additionally, SCP offers a bridge and an independent consulting role between execution organisations, LAs, SCP and vendors to implement sustainable procurement.

Three of the nine interviewees have seen that *"innovation and product development often benefit from external advisors or external organisations"* (3 of the interviewees). One of the interviewees had expected new ideas, models and processes etc. to be applied to their business processes by their civil servants.

Focus on core business LA/insourcing

One of the interviewees mentioned that *"executing procurement procedures is an integral part of the profession of a civil servant and not an additional skill"* (1 of the

interviewees). This interviewee restricted the outsourcing of the procurement function to the SCP. In recent years his organisations had challenged whether the activity should have been outsourced in first place. Conversely, at the start of SCP, the organisation might take into consideration the risk of losing essential knowledge, especially in relation to core competences to execute their primary business tasks. If the savings from budgets and activities do not cover the costs of SCP, activities should be insourced. Hidden costs would occur from executing the procurement function twice.

Another interviewee was convinced that for his LA, *"the SCP unburdens their staff so that civil servants are more focussed on material aspects and the content of contracts"* (1 of the interviewees). Their argument was that the SCP adds value in terms of gaining and sustaining a competitive advantage on procurement.

Outsourcing procurement function

Seven interviewees have mostly different motivations for participating in the SCP. It varies from more objectivity, independence, distance and visibility to only wanting the SCP for difficult procurement issues. The interviewees agreed that *"SCP leads to more professionalisation in procurement, namely procurement procedures to prevent legal procedures and improved consistency of service"* (7 of the interviewees). None of the interviewees mentioned increased flexibility, cost certainty, reduction of staff costs and free management time.

Information about SCP behaviour is critical for limiting opportunistic behaviours because information lets LAs know what the SCP is actually doing, and the SCP, of course, will realise that it cannot mislead the principals. In the public sector, LAs are more and more aware of their regional partnerships with local authorities (Van Puyvelde et al., 2014). These critical attitudes are concerned influence, financial control, and marginal value.

4.2.3 Generating analytic themes of Transaction Costs Theory

The interviews reflected the different theoretical perspectives of TCT as "debating voices" in search of common ground. The perspectives cover the cost-based view encouraged by the transaction cost economic theory, the management view inspired by

the Agency Cost Theory Eisenhardt (1985), and the core-based view inspired by the Core Competence Theory (Quélin & Duhamel, 2003). These interviews have focused on the transaction costs of the procurement organisation and the sourcing phase. These questions, related to the costs aspect, often refer to the idea of the cost of providing a good or service if it was procured in the market rather than from within the LA.

Procurement organisation costs

All of the interviewees were convinced that *"procurement costs for the sourcing process had been extremely diminished, compared to without the SCP"* (9 of the interviewees). However, the decreasing cost of executing tenders have not been measured structurally. Meanwhile the savings of the extent of the contract value are measured. Three of the interviewees declared that *"they have not had access to equal procurement management information regarding the comparable individual costs of their LA"* (3 of the interviewees). A synchronic and simultaneous procurement project in their LA has never been measured in parallel.

Procurement of human resources

One interviewee noted that *"the costs of human resources for procurement are higher than before"* (1 of the interviewees). In his opinion, nowadays procurement activities are executed and organised across several departments of his organisation. Another interviewee experienced *"lower procurement costs for human resources due to costs being spread across more than one LA"* (1 of the interviewees). Also this particular interviewee noticed *"the demand for more exclusive procurement experts on commodities groups to further develop the professionalism of SCP"* (1 of the interviewees).

Standardisation

Four of the seven interviewees agreed that *"SCP contributes to the standardisation of procurement processes"* (4 of the interviewees). Aspects mentioned include IT procurement procedures, framework contracts, and standardisation of specifications for commodities, sewerage and standard procurement dossiers.

Costs reduction by cut budgets

Two of the nine interviewees, both CEOs, mentioned *"regional projects, like water management, sewerage and basic IT, which were started regionally – and not directly related to procurement – because of financial cuts to national budgets or national price upgrading"* (2 of the interviewees). Joint purchase groups also exist for energy, insurances and flexible human resources, which have led to lower costs but were not initiated on the back of reduced budgets. Budget savings instructed by LA councils are directly calculated in budgets and indirectly forced in procurement projects but not instructed directly to the procurement function, respectively SCP.

Transparency of information

All of the interviewees mentioned that *"the annual procurement plans for the joint procurement projects and individual procurement projects are useful regarding the transparency of information between the SCP and its LAs"* (9 of the interviewees). Also, the decentralised procurement expertise of the SCP to collaborate with civil servants of LAs is stated as important by interviewees. In addition, communication and information about the exchange of procurement specialists in LAs has been seen as critical success factor for executing procurement projects and functions.

The transfer of e-procurement management information about performing of the SCP but also responsibility of effort has been noticed as being necessary to improve the transparency of information between LAs and their SCP. Critically, control of the SCP service through civil servants (principal function) has been remarked upon. Thereby, trust and commitment can be reinforced or damaged.

Duplication in collaboration

All the interviewees presumed that *"their collective public partnership organisations could use each other's additional core skills to work more efficiently"* (9 of the interviewees). SCP and regional public partnership organisations – for example, safety/fire services and environment services – are operating individually, focused on the demands of the LAs, of their participants. The interviewees mentioned that "*their organisations participate in regional collaborative arrangements in public primary services as well as public secondary services, for example procurement, IT and human*

resources" (9 of the interviewees). Moreover, these collaborative public organisations have too limited coordination of their core skills and activities. Most collaborative public arrangements are governed by the same LAs of the same region, in this case East Netherlands.

Lower costs

Three interviewees mentioned that "*SCP has converted their fixed costs into variable costs*" (3 of the interviewees). Five of the nine interviewees declared that their LA did not measure the cost before, during or after using the SCP. These LAs do not possess hard data regarding the inputs and outputs of the SCP compared to the situation before the SCP existed.

Fragmentation in procurement organisation

Two of the nine interviewees recognised *"fragmentation in their LA concerning the procurement function"* (2 of the interviewees). In their organisations, setting objectives and comparing actual results against predetermined standards had not been carried out to monitor the performance of the procurement function. The control department was also not measuring maverick buying between business units and the central procurement department or SCP. Most of the interviewees were aware of several standards of procurement functions in their organisation.

Goal synchronisation

"The inefficiency of executing joint procurement projects" (2 of the interviewees) has been mentioned due to excessive meetings about the details of such processes and not the results. The interviewees argued that there was too little discussion about the content of specifications rather than structural conversations about cost reductions and other themes. Some of the interviewees attribute this to a lack of interest in each other's goals but also the number of participants and the level of majority of the individual procurement organisation of the participated LA. Three CEOs mentioned *"the difference between levels of majority of the individual procurement function of the LA as a potential explanation for non-synchronisation"* (3 of the interviewees). Their SCP, Bizob, had been extended with new members over the last 10 years

Summary

The insights of the CEOs, CFO, CPOs and mayor, regarding themes such as their 'own' procurement resources and outsourcing to SCP, provided a more precise understanding of the research objectives, due to their experience with joint purchasing groups (JPGs) within the SCP and their perceptions of the 'value' of the professional procurement function. Cost reduction was often mentioned as an expectation, even if estimated. This called for more fundamental and quantitative research. The findings from the interviews will be used to build between the qualitative and quantitative data in section 4.3.3 and to support analysis and exploration of the data for the discussion in Chapter 5 (Creswell & Clark, 2011, pp. 203-250; Fetters et al., 2013).

4.3 Document Study

One of the main findings of the in-depth, semi-structured interviews is the lack of hard data available on the performance of procurement functions. The interviewees were confident about the positive contribution of SCP to the procurement performance of their LAs but could not measure this. In this section, additional research related to a recently executed procurement project, has been conducted. The objective of this additional research is to examine evidence of performance of joint procurement projects.

4.3.1 Validity

This data has been uploaded out of an internal locked IT management system of the Bizob SCP. This IT system is used to gain reports about the input of resources into procurement projects and respective outputs. This system has been occupied with real resources, which were needed to execute the procurement projects. The output has been registered from a system that calculated and assessed the procurement projects that were executed for LAs through the SCP. The data contains procurement projects of facility and health commodities for one LA compared with equality JPGs. The measurement contains the sourcing phase of the joint procurement process. These reports have been reviewed through an external accountant in the context of the annual controlling and reporting cycles of the SCP Bizob to its participating LAs. This IT system is annually controlled by external accountancy on construction with financial system.

4.3.2 Comparative analysis of JPG and individual procurement projects and E-procurement

This section sets out an audit-conducted comparison analysing individual procurement projects compared with parallel procurement projects executed in collaboration with joint purchase groups.

Comparative analysis of collaborative joint purchase groups and individual procurement projects

The comparison between individual procurement projects and collaborative joint purchase groups was carried out by comparing the time spent on the sourcing processes. Time spent includes the activities of procurement experts for sourcing and tendering activities, measured in real days. This is shown in the Table 4-1.

Table 4-1 Comparative Analysis of Joint versus Individual Procurement Projects

Central joint purchase groups							
Commodity	**Number of LAs**	**Contract value**	**Efficiency: Procurement costs in days *PCI*** $\sum_{la=1}^{n} PCI$	**Number of LAs**	**Contract value**	**Efficiency: Procurement costs in days *PCSCP*** $\sum_{la>=5}^{n} PCSC$	**Δ *PCI PCSCP***
Accountancy	1 LA n=8	€ 105,630	10.56	14 LAs n=3	€ 112,175	7.05	3.51 33.2%
Social care	1 LA n=6	€ 16,779,382	24.17	16 LA-a n=4	€ 5,141,046	6.40	17.77 73.5%
Multi-functional	1 LA n=8	€ 153,280	11.25	7 LAs n=2	€ 161,225	6.90	4.35 38.67%
Cleaning and inspection sewerage and swirls	1 LA n=8	€ 111,373	6.69	15 LAs n=4	€ 70,122	4.10	2.59 38.71%

Central joint purchase groups							
Transport elder people	1 LA n=7	€ 1,107,504	10.38	17 LAs n=1	€ 2,257,008	5.40	4.98 47.98%
Fuel	1 LA n=4	€ 135,187	5.03	15 LAs n=1	€ 191,615	2.00	3.03 60.24%
Transport students	1 LA n=14	€ 1,950,451	19.31	5 LAs n=2	€ 2,635,945	10.15	9.16 47.44%
Home stair lifts	1 LA n=2	€ 304,149	14.00	9 LAs n=2	€ 167,658	8.25	5.75 41.07%

Assumptions
'Procurement costs in days' contain time in working days (7.2 hours) in the pre-stage and sourcing phase. The compared individual versus joint commodities included equal product/service specifications. Procurement experts of the same SCP have executed individual as well collective procurement projects. The LAs concerned are similar in terms of their local public core activities. The LAs provide services to between 15,000 and 45,000 inhabitants. 57 individual procurement projects were measured. 19 collaborative procurement projects were measured. Internal overhead costs are excluded.

Key finding
Delta (Δ) 33.2% - 73.5% procurement costs days between PCI versus PCSCP.

Comparative analysis of simultaneous and similar collaborative and individual procurement projects

In this section, two procurement projects executed in 2016 are compared in Table 4-2. They are highly similar, which makes an objective comparison more useful. In this case, the comparison is made between different groups of the same substantive type. The objective of this comparative analysis is to make a contribution in the absence of hard data of financial performances of collaborative procurement.

The contexts of the two procurement projects have been compared and contrasted. The performance of the procurement projects has been measured using financial and qualitative indicators.

Comparative analysis has been chosen to compare regional collaborative procurement projects versus an individual energy project. These two projects were executed simultaneously with similar product specifications, similar time to market and correspondingly procurement exerts. The differences are the number of LAs involved. Thus, this comparison should show whether there is a difference in performance for the LAs using different procurement methods for similar tenders.

Table 4-2 Comparative Analysis of Gas & Electra JPG versus IP

Central joint purchase groups							
Commodity	**Number of LAs**	**Contract value**	**Efficiency: Procurement costs in days *PCI*** $\sum_{la=1}^{n} PCI$	**Number of LAs**	**Contract value Annual**	**Efficiency: Procurement costs in days *PCSCP*** $\sum_{la>=5}^{n} PCS$	**Δ *PCI PCSCP***
Gas & Electra	1 LA n=1	€ 1,000,000	€ 12,148	20 LAs n=1	€ 9,200,000	€ 5,398	€ 6,750 55.6%

Assumptions
'Procurement costs in days' contains time in working days (7.2 hours) in the pre-stage and sourcing phase. The individual and jointly projects included similar product/service specifications. Procurement experts of the same SCP have executed the individual as well as the collective procurement projects. The LAs concerned provide similar local public core activities. Internal overhead costs are excluded.

Key findings
Delta (Δ) 55.6% procurement costs days between PCI versus PCSCP Value: • advance local supply of solar systems; • sustainability 100% green supply ;

- re-selling back sale surplus energy;
- e-invoice system;
- e-monitoring system.

Comparative analysis of collaborative and individual IT e-procurement system

In Table 4-3, the costs for an IT e-procurement system between one individual LA and the SCP Bizob has been analysed. The IT e-procurement system contains: sourcing & tender software, supply/contract management software, and a procurement management information system.

Table 4-3 Comparative Analysis of IT Procurement Software

Tender software	LA	SCP (25LA's)
Software application	€ 25.740,-	€ 125.140,-
Training	€ 585,-	€ 7.410,-
Update	In license	In license
Internal app manager	€ 23.520,-	€ 58.800,-
New hardware	n.a.	n.a.
Implementation supplier	€ 14.000,-	€ 14.000,-
Projectmanagement	€ 10.640,-	€ 10.640,-
Linked-up with other systems	n.a.	n.a.
Maintenance	In license	In license
Consultancy	€ 2.800,-	€ 2.800,-
Life cycle	4 years	4 years
Total IT costs	**€ 77.285,-**	**€ 218.790,-**

Contract management	LA	SCP (25LA's)
Software application	€ 8.300,-	€ 24.200,-
Training	n.a.	n.a.
Update	In license	In license
Internal app manager	€ 23.520,-	€ 23.520,-
New hardware	n.a.	n.a.
Implementation supplier	€ 12.800,-	€ 12.800,-
Project management	€ 7.980,-	€ 7.980,-
Linked-up with other systems	n.a.	n.a.

Contract management	LA	SCP (25LA's)
Maintenance	In license	In license
Consultancy	€ 1.400,-	€ 1.400,-
Life cycle	4 years	4 years
Total IT costs	**€ 54.000,-**	**€ 69.900,-**

Management information system	LA	SCP (25LA's)
Software application	€ 5.940,-	€ 24.320,-
Training	n.a.	n.a.
Update	In license	In license
Internal app manager	€ 11.760,-	€ 17.640,-
New hardware	n.a.	n.a.
Implementation supplier	€ 16.940,-	€ 16.940,-
Projectmanagement	€ 6.790,-	€ 6.790,-
Linked-up with other systems	n.a.	n.a.
Maintenance	In license	In license
Consultancy	€ 10.560,-	€ 10.560,-
Life cycle	4 years	4 years
Total IT costs	**€ 51.990,-**	**€ 76.250,-**

Assumptions:		
LA	:	1 Local Authority with 3 users
SCP (25 LAs)	:	25 Local Authorities with 38 users
Software application	:	SAAS (cloud), licence costs
Training	:	Costs based on users
Internal application manager	:	Variable rate
Implementation supplier	:	Fixed amount from tender
Project management	:	Fixed amount
Consultancy	:	Fixed amount

Key findings		
Total IT costs:	1 LA	SCP 25 LAs
Sourcing/tendering software	77,285	218,790

Key findings		
Supply/contract management	54,000	69,900
Management information system	51,990	76,250
Value:	Quality of services	Information symmetry Complementary resources Quality of services

Comparative analysis of collective procurement expert capacity

Economies of scale are often mentioned in up-scaling discussions in the public sector, especially in the local sector. This study suggests that there are opportunities for structural collaboration in the area of public procurement, which could have an internal and external financial impact. Figure 4-2 considers a cost-comparative analysis between up-scaling execution procurement projects inside LA or executed by the SCP.

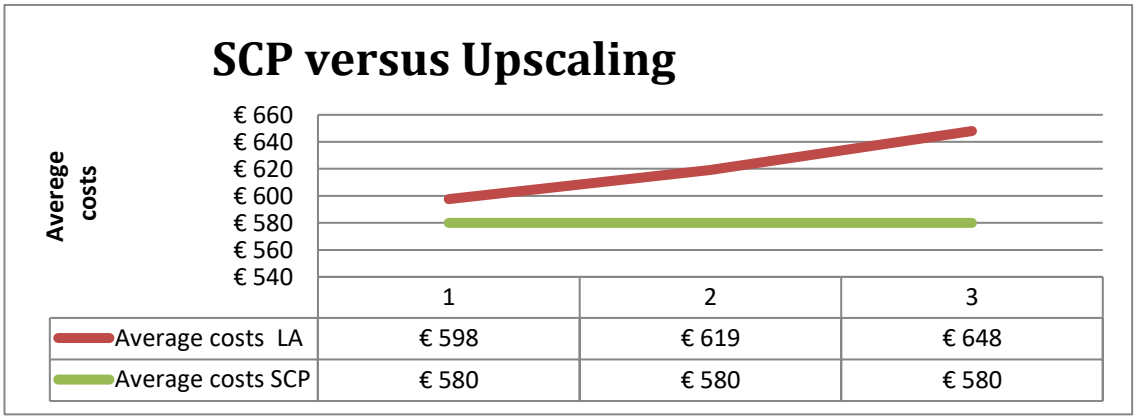


Figure 4-2 Comparison analysis, SCP versus up-scaling procurement costs for LA

This analysis shows that the internal costs of up-scaling are higher than the costs of procurement resources being delivered through SCP. In this case, economies of scale related to procurement costs through centralisation or merging can be more inefficient than the procurement costs of SCP.

Assumptions:		
1 LA	:	LA (< 50.000 inhabitants)
2 LA	:	LA (50.001 < Inhabitants < 100.000
3 LA	:	LA > 100,000 inhabitants
Procurement expert capability	:	
average costs LA (total)	:	Fixed amount
average costs SCP (total)	:	Fixed amount

Key findings		
Procurement experts capability costs:	SCP	Insourcing
LA 1	580	598 (VNG)
LA 2	580	619 (VNG)
LA 3	580	648 (VNG)
Value:	Day-rate contains continue full services	Day-rate contains availability capability

Comparative analysis of spend day-rate during JPG

The data shown in Figure 4-3 compares the spend time during the execution of JPGs projects. Several different commodities have been compared in spend time during several stages in the procurement process. How further in the procurement process, relatively less time has been spend. Also the type and characteristics of commodities affect the required cycle time.

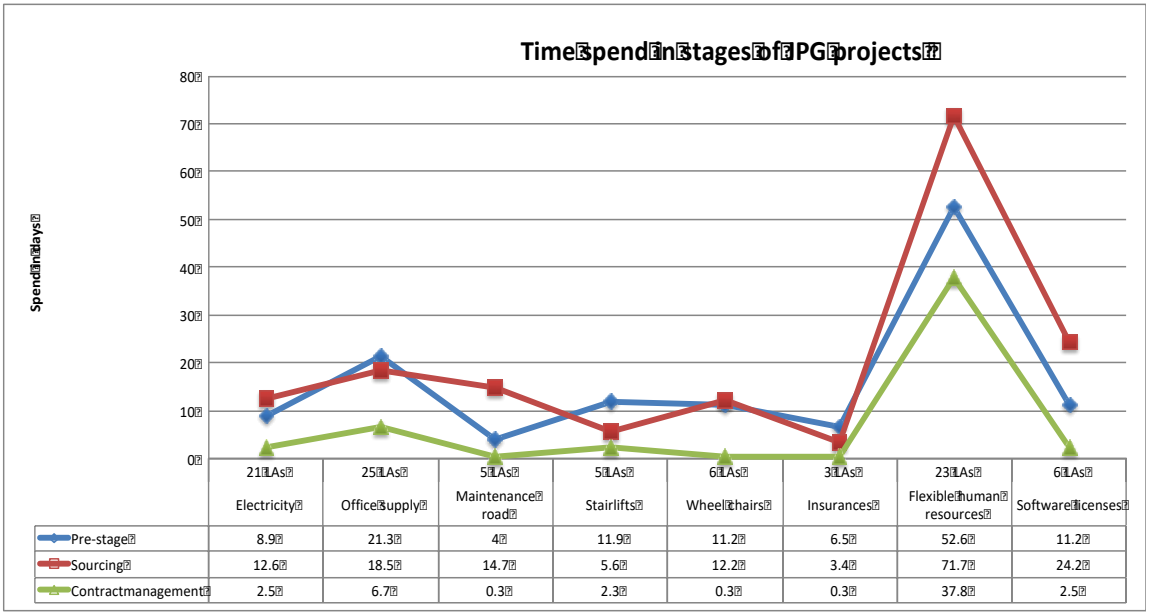


Figure 4-3 Time Spend in Stages JPGs

Assumptions:			
Spend day	:	7.2 hours	
Commodity groups JPG's (Kraljic, 1983)	:	Electricity	Routine products
		Office supply	Routine products
		Maintenance road	Leverage products
		Stair lifts	Bottleneck products
		Wheel chairs	Leverage products
		Insurances	Bottleneck products
		Flexible human resources	Strategic products
		Software licenses	Bottleneck products
Limitations	:	8 cases	

Key findings	
Spending days increased affected through	Type of commodity, complexity of supply market and financial risk
Pre-stage	Strategic and bottleneck products
Sourcing	Strategic and significantly LAs
Contract management	Strategic and significantly LAs

Furthermore, the findings supported cost efficiency in JPGs as well as in collaborative IT procurement systems.

4.3.3 Integration through methods: qualitative into quantitative

This initial study informed the generation of variables regarding factors potentially associated with better performances and identified themes that influence the key effects of SCP and contribute to the procurement performance of LAs. The qualitative database informs the data collection approach of the questionnaire (Fetters et al., 2013). Table 4-4 presents how the qualitative data were used to build quantitative questionnaire variables / items.

Table 4-4 Using qualitative data to build questionnaire items for the quantitative study

Domains, quotations from thematic coded text and interviews	Corresponding Variable / item	Code Questionnaire
Access to expertise / knowledge *'Procurement knowledge and expertise are necessary for small LAs; civil servants are too generally skilled, therefore procurement cooperation is valuable for us'.*	LAs have access to professional procurement specialists to manage individual procurement projects through SCP	SCPRBT3
	LAs have access to strategic procurement management to improve strategic position via structural collaborative procurement organisation	SCPCCT7
Lower costs *'SCP is mainly known for downsizing procurement costs'.*	SCP leads to minimising of transaction costs in the sourcing phase, tender phase	SCPTC1;
	SCP lead to minimising of transaction costs in the supply phase	SCPTC2

Domains, quotations from thematic coded text and interviews	Corresponding Variable / item	Code Questionnaire
Product development 'Improving sustainability in procurement [is] certainly something we see as [a] value of SCP: Embedding national guidelines such as sustainability and social re-entry of unemployed people, in our local procurement policy and strategy'.	Our LAs have more advantages to access product/technological developments compared to without structural collaborative procurement organisation Our LAs have more access to innovation via structural collaborative procurement organisation	SCPRBT5 SCPCCT6

In Table 4-5, the findings of this qualitative section are summarised and connected the two strands. In 0 the coded variables / items are included.

Table 4-5 Findings Qualitative Research

Objective		
- Collect primary data **- Qualitative data used for refining the variables for the quantitative study**		**Interpreted in the variables / items**
Qualitative		Quantitative
Interviews	**Case study**	**Code Questionnaire**
Themes: • access to expertise/knowledge • access to capacity • access to dedicated personnel to manage the collaborative procurement processes • sharing experiences • cross-organisational teams for process design and improvement	**Comparative analysis:** • costs of individual procurement projects versus collaborative procurement	 SCPRBT3;SCPCCT7 SCPRBT3;SCPRDT7 SCPRBT2 SCPRBT4;SCPRBT4 SCPRBT1

• resource dependence diminishing	projects	SCPRDT1;SCPRDT2
• demand share	• IT	SCPRDT8;SCPRDT9
• legitimacy/reputation	procurement	SCPRDT9;SCPRDT10
• output value products	system for	SCPCCT1
• goal synchronisation	SCP or	SCPAT1;SCPAT2
• symmetry of information	individual	SCPAT7;SCPRDT5;
• transparency of information	• Procurement	SCPRDT6 ;SCPRDT4
• cycle time of procurement projects	expert	SCPCCT1;SCPTC8
• duplication collaborations	capacity	SCPAT3
• procurement organisation costs	• Spend day-	SCPTC3;SCPTC4
• procurement human resources/capacity	rate during	SCPRBT3;SCPTC11
• standardisation	JPG	SCPTC4;SCPTC10
• flexibility in (procurement) planning		SCPCCT2
• reducing organisational risks		SCPCCT8;SCPTC9
• focus on core business		SCPCCT4
• outsourcing procurement function		SCPAT4;SCPCCT5
• insourcing		SCPAT5;SCPTC6
• increase lower costs		SCPTC1;SCPTC2
• product development		SCPRBT5;SCPCCT6
• fragmentation procurement function		SCPAT3;SCPCCT1

Phase I stipulated three-fold information. Firstly, rich data to get close to the social actors, meanings and interpretations. Interviewees were invited to offer their strategic, tactical and operational considerations and point of views regarding SCP and "what's in it for their LA". The findings pointed to a conclusion that several indicators directly influenced the outcome of the SCP.

It materialised that the RBT, and TCT might be more appropriate for explaining internal individual considerations. Besides, TCT explains the efficiency and effectiveness of SCP for LAs, which had been recognised as a key performance indicator. An efficient and effective execution of JPGs was significant in terms of the degree of success of SCP.

Secondly, the document study established the assumptions of the TCT; fundamental evidence was required to confirm the suspicion of lower transaction costs experienced by JPGs.

Thirdly, the inquiries of phase I delivered valuable material to refine the research themes and enhance the variables for the quantitative phase.

4.4 Phase 2: Quantitative Investigation

In this section, quantitative research has been executed to gain primary data from the questionnaires conducted at the LAs.

Hypothesis	Qualitative research focus
Hypothesis 1 ***Structural collaborative procurement has a significant positive effect on collaborative benefit.***	In-depth interviews identify the types of value due to cooperation and gain these benefits. Questions examine how structure can be implemented in collaboration and how structure can have an impact on the output of the collaboration model.
Hypothesis 2 ***Collaborative benefit has a significant positive effect on the procurement performance of the individual local government organisation.***	In-depth interviews identify the (positive) effects of SCP for individual local governments. Questions examine the advantages and disadvantages for the operation of local governments.
Hypothesis 3 ***Coordination between structural collaborative procurement and individual local government organisations moderates the procurement performance of a local government organisation.***	In-depth interviews investigate coordination between members of collaborations and the instruments used to harmonise the individual members towards the common goal. Several collaborations and the inefficiency between these collaborations are studied.

4.4.1 Implications for the quantitative study arising from the qualitative study

Several key viewpoints from the findings from the qualitative study were coded into themes and variables/items for the questionnaire as analysed in 4.3.3. and included in 0. The findings pointed to a central understanding that SCP improves the procurement performance of LAs, as all interviewees stated this and this was also supported by the document investigation.

The interviewees revealed the influencers that affected the output of the SCP, which affected the performance of the LA, such as *access to expertise/knowledge, capacity, dedicated personnel to manage the collaborative processes, quality and resource sharing*. The collaborative knowledge must be *shared* with the LAs.

The interviewees were all convinced that the *buying power aggregated* in the SCP makes the LAs *stronger in monopolistic or oligopolistic markets.* The most frequent negative belief reported was that SCP could involve *loss dependency.*

A *minority* of the interviewees reported negative beliefs about the *financial benefits* of SCP, mainly concerned with the fact that there are no facts or figures laying out the benefits.

The *majority* of the interviewees mentioned *goal synchronisation and symmetry of information* as a factor that can contribute to the effectiveness and efficiency of collaboration between LAs in their region.

All of the interviewees have indicated that *procurement costs have been diminished* through SCP. In some cases there was a lack of procurement information of comparable individual costs of their LA.

All of the interviewees recognised that *organisational risks have been diminished* and more value added via partly outsourcing the procurement function through SCP, and *procurement has become more professional*. However, one negative aspect – *loss of control and fragmentation in their LA* – was also mentioned as a result of outsourcing procurement.

These experiences have underlined important positive and negative experience and attitudes, which need to be taken into consideration when designing a questionnaire tailored towards measuring and extracting influencers of and barriers to advancing procurement performances of LAs through collaboration.

The operational scheme has been revised and adapted in response to the findings of the qualitative part and has been adapted in the code scheme and questionnaire. Hence the

questionnaire was developed, drawing on both the theory, outlined in the literature review, and the insights gained from the interviews.

4.4.2 Analytical generalisation

An important discussion in this research is about the extent to which, based on the findings in the case study and the questionnaire, relevant contributions to science and businesses can be drawn for other corporations, community organisations and governments. Below the analytical generalisation will be discussed – a technique that results from mixed studies linked via the two theories to provide a wider and new collaboration theoretical application range.

There are two types of generalisation: statistical and analytical generalisation (Collis & Hussey, 2014). In the case studies, however, finding quantitative numbers is not the goal of the investigation. Case studies are, however, in a different way suitable to generalise data to a broader theoretical framework of measurement (Creswell, 2003; Venkatesh et al., 2013; Yin, 2003). This can be done by means of analytical generalisation, also referred to as theoretical generalisation. Analytical generalisation means that the results of one or more cases can be associated with the existing literature on the subject in question. Here the data from the cases can strengthen, qualify and supplement the existing theory (Blaikie, 2010; Collis & Hussey, 2014). According to Blaikie (2010, pp. 200-228) the possibility of generalisation primarily depends on the persuasiveness of the theoretical reasoning. In this research the figures of the document study support the findings of the interviews and questionnaire. The expected cost reductions were proved in the document studies in section 4.3.2.

4.4.3 Preliminary considerations

The data has been examined prior to analysis. The natures of the variables have also been examined. This is the first step before conducting specific statistical techniques to explore the data. The distribution of the data has been assessed in terms of normality and checked for outliers. Also, missing data have been analysed. Firstly, the background of the respondents will be described. This is central for the representativeness of the sample (Blaikie, 2010; Bryman, 2016b). This is to determine if the respondents are

capable of judging the procurement performance of their LA related to the contribution from SCP, and if they are representative of LAs across the Netherlands.

4.4.4 Descriptive statistics

In this section, univariate analyses have been applied to the data from the questionnaire of Appendix IX. Frequency distributions, central tendencies and dispersion of the data have been investigated. While descriptive statistical methods are important for organising and characterising data, this allows patterns to be recognised that are not apparent in the raw data and positively aids subsequent hypothesis proofing (Berenson & Levine, 1996, p. 3; Lovie, 1986). It also helps to support the qualitative findings from the first part of this chapter (Creswell & Clark, 2011, pp. 203-250).

Twenty-three cases were deleted as a high percentage (over 40%) of the variable items required for analysis were missing. Thus, the total valid number of cases was 112.
In Table 4-6, the response rates are outlined.

Table 4-6 Number of Requests and Respondents

Number of SCPs requested	Number of SCPs responding	Number of LAs requested	Number of LAs responded
30	30	91	112 from 91 separate LAs

The respondents have been requested for their knowledge or experience with procurement performance and collaboration. Table 4-7 shows the organisational functions of the respondents.

Table 4-7 Organisational Function

Organisational Function

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strategic-policy maker	24	21.4	21.6	21.6
	Operational	1	0.9	0.9	22.5
	Tactical, senior servant	13	11.6	11.7	34.2
	Management	73	65.2	65.8	100.0
	Total	111	99.1	100.0	
Missing	System	1	0.9		
Total		112	10.0		

Most of the respondents (65.2%) had a management function involving procurement. Secondly, 21.4% had a strategic function or strategic policy function in the area of procurement in their organisation. A small group of 11.6% were more tactically involved with procurement activities.

Table 4-8 shows the professions of the respondents. The targeted respondents were financial experts, infrastructure work experts and social care experts.

Table 4-8 Domain Function

Profession

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Financial/controller	65	58.0	58.0	58.0
	Infra structural works	21	18.8	18.8	76.8
	Social Domain	8	7.1	7.1	83.9
	Other	18	16.1	16.1	100.0
	Total	112	100.0	100.0	

Most of the respondents (58.0%) had a financial position. This could be a strategic, financial or more cooperative control function. Secondly, 18.8% of the respondents had infrastructure work functions. Lastly, 7.1% of respondents had a function in the social care domain. These last two groups had primarily business positions within procurement activities. A group of 16.1% had 'other' functions than financial/controller, infrastructural works or social domain.

Table 4-9 provides an overview of the number of inhabitants of the LA that the respondent represented.

Table 4-9 Distribution Size of LAs

Inhabitants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 – 15,000 Inhabitants	15	13.4	13.4	13.4
	15,001 – 25,000 Inhabitants	29	25.9	25.9	39.3
	25,001 – 35,000 Inhabitants	26	23.2	23.2	62.5
	35,001 – 50,000 Inhabitants	22	19.6	19.6	82.1
	50,001 – 65,000 Inhabitants	5	4.5	4.5	86.6
	65,001 – 100,000 Inhabitants	7	6.3	6.3	92.9
	100,001 - >	8	7.1	7.1	100.0
	Total	112	100.0	100.0	

Most of the respondents were working in a LA organisation representing 15,001 –

25,000 inhabitants. This was followed by the group of LAs with 25,001 – 35,000 inhabitants. LAs with 35,001 – 50,000 inhabitants were situated in third place. In fourth place was LAs with 0 – 15,000 inhabitants. Larger municipalities were less represented at just 6.3% and 7.1%.

Qualitative public policy themes such as sustainability, green procurement, social aspects, and access for SME firms in the LA questionnaires are shown in Figure 4-4.

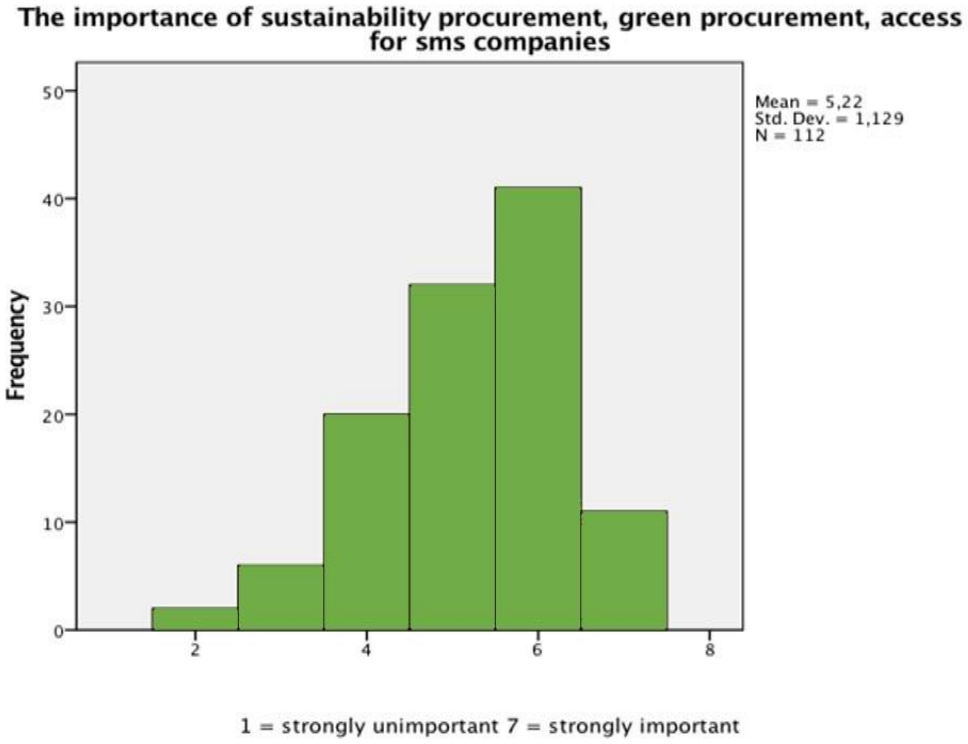


Figure 4-4 Importance Policy Procurement Goals

The degree of using several collaborative arrangements by some public agencies are shown in Table 4-10:

Table 4-10 Public Organisations and Procurement Issues

	N	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
LAs make use of (collaborative) public organisations where procurement functions are integrated and executed	91	1	7	4.36	.176	1.683

4.4.5 The choice of parametric algebraic analysis technique

The normality assumptions for each question, variable/item have been initially tested with reference to an inspection of both the histograms and the Skewness and Kurtosis values. The majority of the items/variables had mesokurtic distributions (bell-shaped), which indicated normality. However, some items/variables had platykurtic characteristics (large spread of results at the fringes).

The overall rule is that if skewness and kurtosis are in excess of +/- 1.96, this indicates a violation of normality and the data is normally distributed (Berenson & Levine, 1996, pp. 273-318). Appendix XI data from the skewness analysis, which indicated that 0 items were outside the skewness and kurtosis interval. This skewness and kurtosis analysis indicates that the data is normally distributed.

Besides the skewness and kurtosis analysis, a search through the extreme-value box plots discovered a small number of outliers for a large number of variables and a small number of extreme outliers connected with highly skewed variables. The Kolmogorov-Smirnov and Shapiro-Wilk analysis has also been conducted. These levels of statistical significance were mostly zero and thus below $p > 0.05$. Several researchers have discussed the sensitivity of this test by misreporting with lager samples ($n > 30$) and the applicability of this test when using seven-point Likert scales (R. Kennedy, Riquier, & Sharp, 1996; Pallant, 2010).

Hence, when statistical tests were conducted – scale analysis, factor analysis and multiple regression – alongside the foregoing descriptive analysis, the data generally appeared to have relatively normal distribution.

4.4.6 Missing value analysis

There are several ways to deal with missing data. On one hand, statistical inference can be used to replace missing data. On the other hand, cases with missing data can be deleted pair-wise or list-wise, which often results in shrinkage of the sample size (Pallant, 2010, p. 58). In this study, the impact of the missing values for the scale items was not considered a significant issue as all of the items had less than 25% of their values missing and any variable/items had control function. Green and Salkind (2014); Pallant (2010) recommended the option in SPPS to exclude cases pair-wise whereby cases are only excluded if they are missing the data required for the specific analysis. The missing data was analysed as Missing at Random (MAR = H0) or Not Missing at Random (NMAR = H1). The Little (1998) test was executed and showed that the data is missing at random (df >0,5).

4.4.7 Scale consistency

This section sets out the internal consistency of the scale that has been used in the questionnaire. This refers to how the items that make up the scale are connected with the dimensions. First the scale consistency is tested on a general level and subsequently it is tested on a dimension level. The statistical calculations for first data set – resource sharing – are shown in this section. In the last paragraph, Cronbach's Alpha values are summarised. The analyses for the scale consistency of the other data sets are included in Appendix X.

Scale consistency general

This quantitative study espouses restricting multi-scale measurements to the descriptive part of the questionnaire. In the main part of the questionnaire, selected respondents have been requested to give qualitative assessments. A semantic differential rating scale (Rosencranz & McNevin, 1969) has been applied in the questionnaire. When utilising multiple indirect measurements (Francis et al., 2004), beginning and end points are recommended (Francis et al. (2004). The respondents are asked to rate a professional experience that is used to capture the underlying fundamental dimension.

For the reliability of the SCP, an assessment was calculated to indicate the degree to which it was free from random errors. Therefore, this study used four all-inclusive internal scale reliable tests in SPSS v23. The tests conducted are Cronbach α and the interim correlation matrix. Regarding the SCP scale, a Cronbach α coefficient of 0.970 was produced, which indicated respectable internal consistency/reliability in Table 4-11 Reliability Statistics below. Cronbach α composes the average covariance between item-pairs, and the variance of the total score. It measures internal consistency in terms of how closely related sets of items are as a group. If an item is deleted, the values of Cronbach's Alpha are not higher than the final alpha value, so no item has to be removed from the scale (Pallant, 2010, p. 100).

Table 4-11 Reliability Statistics Total

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha based on standardised items	N of items
.970	.971	50

Item analyses were conducted on the 50 items assumed to assess the two theories, which hypothetically affect SCP and the performance of LAs. Initially, each of the 50 items were correlated with the total score of the two theories (Table 4-12).

Table 4-12 Item SCP Item-Total Statistics

Structural Collaborative Procurement: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SCPRBT9	180.90	1741.690	.561	.862	.964
SCPRDT1	180.26	1710.230	.747	.854	.963
SCPRDT2	180.90	1719.457	.674	.837	.964
SCPRDT3	180.61	1709.443	.839	.942	.963
SCPRDT4	180.97	1715.999	.787	.946	.963
SCPRDT5	180.64	1714.734	.797	.959	.963
SCPRDT6	180.31	1711.118	.797	.933	.963
SCPRDT7	180.23	1697.580	.853	.957	.963
SCPRDT8	179.97	1728.599	.678	.920	.964
SCPRDT9	180.25	1728.889	.717	.935	.964
SCPRDT10	180.51	1730.221	.634	.932	.964
SCPAT1	180.72	1740.338	.524	.882	.964
SCPAT2	180.18	1759.517	.436	.842	.965
SCPAT3	180.89	1744.803	.460	.769	.965
SCPAT4	180.93	1755.662	.378	.826	.965
SCPAT5	181.64	1819.101	-.083	.743	.967
SCPAT6	180.59	1687.079	.680	.903	.964
SCPAT7	181.28	1710.771	.681	.932	.964
SCPAT8	181.61	1717.543	.549	.897	.964
SCPAT9	181.23	1776.080	.210	.830	.966
SCPAT10	180.69	1730.685	.555	.866	.964
SCPAT11	180.95	1695.014	.693	.895	.964
SCPTC1	180.69	1718.551	.741	.946	.963
SCPTC2	181.66	1728.930	.584	.882	.964
SCPTC3	181.28	1719.171	.737	.950	.963
SCPTC4	181.74	1742.730	.449	.872	.965
SCPTC5	180.66	1749.896	.543	.911	.964
SCPTC6	180.84	1754.673	.477	.919	.964
SCPTC7	180.84	1694.539	.830	.945	.963
SCPTC8	182.08	1739.877	.562	.810	.964
SCPTC9	181.49	1720.287	.667	.884	.964
SCPTC10	180.64	1738.901	.667	.914	.964
SCPTC11	180.54	1716.586	.793	.943	.963
SCPTC12	180.82	1721.050	.743	.938	.963
SCPCCT1	182.08	1746.543	.529	.891	.964
SCPCCT2	182.02	1723.383	.601	.847	.964
SCPCCT3	181.26	1715.997	.702	.887	.964
SCPCCT4	180.64	1711.001	.750	.955	.963
SCPCCT5	181.25	1714.255	.690	.916	.964
SCPCCT6	181.72	1751.071	.465	.856	.965
SCPCCT7	181.38	1695.972	.795	.919	.963
SCPCCT8	181.28	1712.538	.635	.950	.964

Sub-scale consistency dimension: resource sharing

With regard to the consistency subscale of resource sharing, four significant tests are executed.

First a Cronbach α coefficient of 0.904 was found, which indicated very good internal consistency, as shown in Table 4-13.

Table 4-13 Reliability Statistics: Resource Sharing and Business Capabilities

Reliability Statistics: Resource Sharing and Business Capabilities		
Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
,904	.906	9

Table 4-14 Inter-Item Correlation Matrix: Resource Sharing and Business Capabilities

Inter-Item Correlation Matrix: Resource Sharing and Business Capabilities									
	SCPRBT1	SCPRBT2	SCPRBT3	SCPRBT4	SCPRBT5	SCPRBT6	SCPRBT7	SCPRBT8	SCPRBT9
SCPRBT1	1.000	.571	.604	.538	.616	.472	.402	.391	.519
SCPRBT2	.571	1.000	.797	.508	.602	.535	.413	.409	.527
SCPRBT3	.604	.797	1.000	.582	.591	.517	.552	.506	.542
SCPRBT4	.538	.508	.582	1.000	.567	.468	.561	.646	.441
SCPRBT5	.616	.602	.591	.567	1.000	.587	.419	.412	.541
SCPRBT6	.472	.535	.517	.468	.587	1.000	.416	.382	.562
SCPRBT7	.402	.413	.552	.561	.419	.416	1.000	.584	.408
SCPRBT8	.391	.409	.506	.646	.412	.382	.584	1.000	.434
SCPRBT9	.519	.527	.542	.441	.541	.562	.408	.434	1.000

Secondly, the inter-item correlation mix has been executed in Table 4-14, which checked for positive correlations as this indicated that each item/variable is measuring the same construct.

Thirdly, the statistics dimension of resource sharing, in Table 4-15, shows only positive correlations, which suggest that each item is measuring the same underlying construct and the corrected item-total correlation is above the recommended 0.3 level (Pallant, 2010, p. 100; Pavot, Diener, Colvin, & Sandvik, 1991).

Fourthly, Cronbach α, if deleted, examined the impact of removing each item/variable from the scale by comparing the original scales value and the “if deleted value”. Here, the Cronbach α will be lower if an item/variable would be deleted. The items/variables fit this scale.

Table 4-15 Item-total statistics: Resource Sharing and Business Capabilities

Item-total statistics: Resource Sharing and Business Capabilities

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SCPRBT1	37.23	110.987	.671	.503	.894
SCPRBT2	36.14	105.213	.719	.678	.890
SCPRBT3	36.15	99.987	.783	.722	.884
SCPRBT4	36.81	106.135	.718	.576	.890
SCPRBT5	36.86	107.152	.708	.561	.891
SCPRBT6	36.97	109.524	.639	.463	.895
SCPRBT7	37.29	103.481	.618	.461	.899
SCPRBT8	37.53	106.110	.621	.506	.897
SCPRBT9	37.10	110.333	.646	.457	.895

To close, two internal consistency estimates of reliability were computed for the resource sharing scale: a split-half coefficient expressed as a Spearman_Brown corrected correlation and a coefficient alpha. For the split-half coefficient, the scale was split into two halves such that the two halves would be as similar as possible. In splitting the items/variables, one of the halves included even and odd item/variables of resource sharing. The values for the coefficient alpha and the split-half coefficient were the same at 0.920/0.921, each indicating acceptable reliability, as shown in Table 4-16.

Table 4-16 Reliability Statistics: Resource Sharing and Business Capabilities

Reliability Statistics: Resource Sharing and Business Capabilities			
Cronbach's Alpha	Part 1	Value	.836
		N of Items	5[a]
	Part 2	Value	.793
		N of Items	4[b]
	Total N of Items		9
Correlation Between Forms			.852
Spearman-Brown Coefficient	Equal Length		.920
	Unequal Length		.921
Guttman Split-Half Coefficient			.908
a. The items are: SCPRBT1, SCPRBT3, SCPRBT5, SCPRBT7, SCPRBT9.			
b. The items are: SCPRBT2, SCPRBT4, SCPRBT6, SCPRBT8.			

Sub-scale consistency dimension: data sets

Table 4-17 summarises the Cronbach's Alpha coefficient and the Spearman-Brown coefficient for the data sets out of the operational scheme of Appendix V.

Table 4-17 Reliability Statistics Sub-Scale Consistency Dimensions

Data set	Cronbach α coefficient	Spearman-Brown coefficient
Resource Sharing	0.904	0.920/0.921
Resource Dependence	0.706	Two variables
Diminishing		
Information Asymmetry	0.890	0.882/0.882
Demand share	0.708	Two variables
Reputation	0.849	Two variables
Goal Synchronisation	0.640	0.810/0.810
Transparency of	0.814	0.870/0.870
information		
Procurement costs	0.896	0872/0.874
Standardisation	0.856	Two variables
Value	0.740	0.834/0.834
Capabilities	0.843	0.851/0.851

4.4.8 Latent variable: factor analysis

Introduction

This section explores if there is any underlying consistency between the 50 measured variables. These variables are measured through the questionnaire and are recognised as primary data measured on a Likert scale. This is mentioned as an independent method, whereby no difference has been made in the independent and dependent variables. The objective of this analysis is to understand the structure of the data through reducing the data: is it possible to construe the latent variable or underlying variable (Green & Salkind, 2014, pp. 282-285). The statistical tests and analyses to produce robust fact analyses have been included in Appendix X and Appendix XI.

The factor analysis examines the correlation between the pairs of underlying variables measured on seven scale-rating scales (Pallant, 2010, pp. 181-201). This is called exploratory factor analysis (EFA). It is also appropriate if a group of indicators is presupposed. IT will be used to test whether the presumed quantity and nature of the dimensions are indeed reflected in the data. The aim of factor analysis is to expose any latent variables that cause the noticeable variables to determine.

Exploratory factor analysis is a complicated technique. Rietveld and Van Hout (1993, pp. 289-294) described in a diagram how to execute effective exploratory factor analysis. This is described in Figure 4-5.

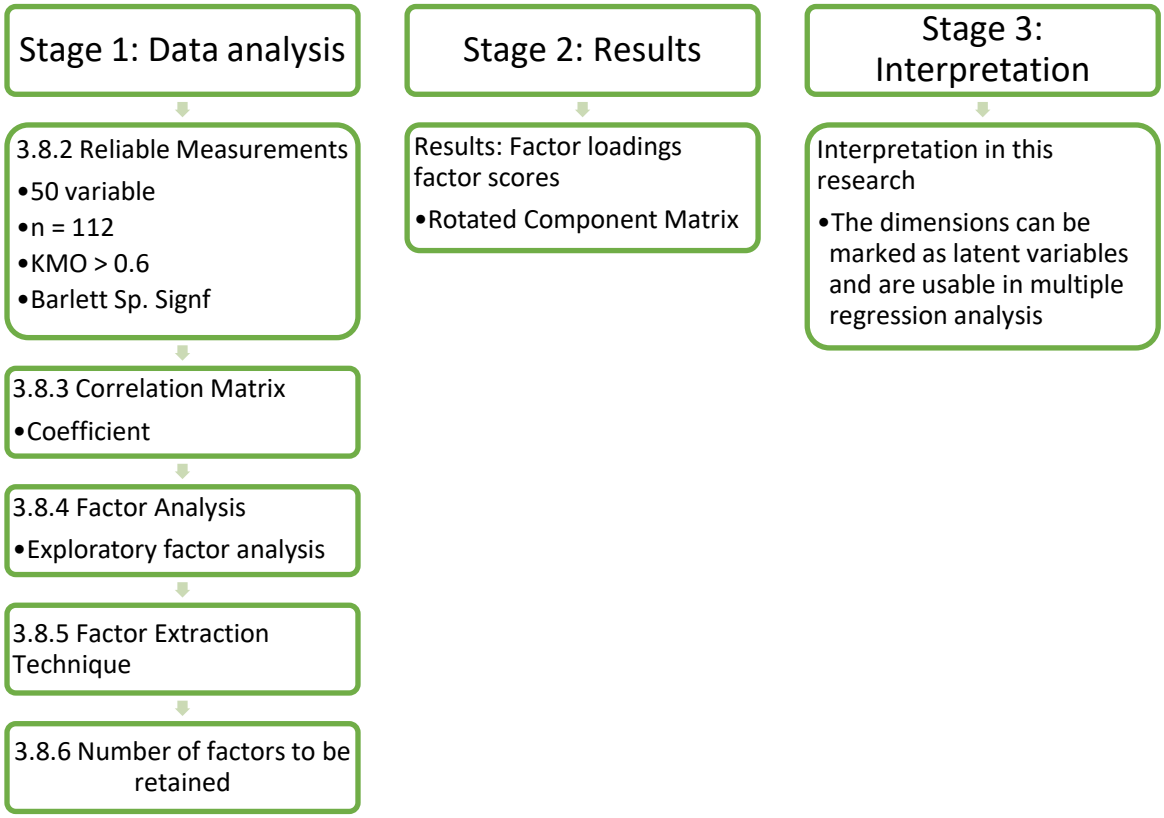


Figure 4-5 Process Factor Analysis

The statistical tests and analyses mentioned in Figure 4-5 to produce robust factor analyses are included in Appendix XII.

Results: factor loadings & factor score

Finally, the rotated component matrix, in Table 4-18, shows the factor loadings for each variable.

Table 4-18 Rotated Component Matrix

Rotated Component Matrix[a]

	Component										
	Resource sharing and business capabilities I	Cost reducing II	Uncertainty III	Coordination mechanism IV	Agility & flexibility V	Control of information VI	7	8	9	10	11
SCPRBT2	,781										
SCPRBT3	,767										
SCPRBT1	.729		.342								
SCPRBT5	.675						.313				
SCPRDT1	.638	.331									
SCPTC11	.611	.449		.311							
SCPAT11	.591					.513					
SCPCCT4	.562	.399			.331						
SCPRDT7	.534	.529	.302								
SCPRBT4	.530			.304					.399	.379	
SCPRBT9	.529		.465								
SCPRBT8	.509			.385					.365		
SCPRBT7	.500			.427							.437
SCPCCT8	.492	.304			.421			.325			
SCPTC7	.489	.459	.321			.337					
SCPRBT6	.437	.359	.428				.343				
SCPTC3		.805									
SCPTC12		.719									
SCPCCT3	.363	.717									
SCPTC1		.669	.331								
SCPTC6		.643		.360							
SCPTC5		.605		.378							
SCPTC2		.568					.390				
SCPTC4		.516		.470							
SCPTC10		.499		.339							-.368
SCPRDT5	.402	.437	.387								
SCPTC9	.330	.436								.343	-.370
SCPRDT8	.327		.741								
SCPRDT10			.731	.436							
SCPRDT9		.311	.715								
SCPRDT6	.355		.700								
SCPRDT2			.683								
SCPRDT4	.481	.389	.532								
SCPRDT3	.455		.528								
SCPAT2				.815							
SCPAT1				.751							
SCPAT10				.485			.331		.345		
SCPCCT1					.775						
SCPCCT6					.709						-.328
SCPCCT2		.306			.610						.366
SCPTC8	.309	.446			.556						
SCPCCT7	.301				.403	.327	.399				
SCPAT8						.739			.304		
SCPAT7	.369					.710					
SCPAT6	.386					.686					
SCPAT3							.664	.358			
SCPCCT5	.309				.340	.329	.629				
SCPAT4								.783			
SCPAT9									.835		
SCPAT5										-.816	

4.4.9 Linear regression

Collis and Hussey (2014, pp. 281-287) state that linear regression is more advanced than correlation in factor analysis. Additionally, in factor analysis a linear regression provides an indication of an independent variable's ability to predict an outcome for a dependent variable. Pallant (2010, p. 110) recommends linear regression for complex real-life research questions based on theoretical or conceptual models. If factors are correlated in reality, orthogonal rotations can generate false solutions, thus threatening theory building. Therefor instead suggest oblique rotations can be used (Treiblmaier & Filzmoser, 2010).

Krishan, Kanchan, and Sharma (2012) found results in their research which suggest that the range of error in the estimation of stature from the regression analysis method is lower than that of the factor method. This confirms that the regression analysis method is superior to the factor analysis in stature estimation. For this research, regression analysis has been executed as well as exploratory factor analysis.

In Appendix XIII, the variables related to the corresponding factors have been determined. A factor pattern matrix presents coefficients (analogous to regression beta weights) that reflect the unique contribution of each variable to each factor (Tabachnick & Fidell, 2006).

In this paragraph several analyses have been executed for the control of the analysis, because the assumptions are analogous to those of the analysis of variance, since they fall under the general heading of linear models and are different in the assumptions made by the regression model and by correlation (Berenson & Levine, 1996, pp. 781-846). A linear regression for the dimension 'resource sharing & business capabilities' is executed in the following paragraphs.

Linear regression 'Resource sharing & business capabilities'

Factor 1: resource sharing & business capabilities has been put in the multiple regression model for the dependent variable. Variables SCPRBT2, SCPRBT3, SCPRBT1, SCPRBT5, SCPRDT1, SCPTC11, SCPAT11, SCPCCT4, SCPRDT7, SCPRBT4, SCPRBT9, SCPRBT8, SCPRBT7, SCPCCT8, SCPTC7, SCPRBT6, have

been moved as independent variables to the model. A description of the values/items can be viewed below:

- SCPRBT2 LAs have access to dedicated personnel to manage the collaborative process through the SCP
- SCPRBT3 LAs have access to professional procurement specialists to manage individual procurement projects through SCP
- SCPRBT1 LAs use cross-organisational teams for process design and improvement through the SCP
- SCPRBT5 LAs have more advantages to product/technological developments through the SCP
- SCPRDT1 LAs share/get access to critical/special procurement knowledge, expertise and resources through the SCP
- SCPTC11 LAs have more standardisation and uniformity in the procurement services through the SCP
- SCPAT11 LAs have access to a legal tender helpdesk through the CPS
- SCPCCT4 LAs have established procurement decisions on the right levels in the organisation through the SCP
- SCPRDT7 LAs have more access to professional procurement experts and less external through the SCP
- SCPRBT4 LAs share technical knowledge through the SCP
- SCPRBT9 Civil servants of local governments are indirectly trained in business skills through the SCP
- SCPRBT8 LAs pool procurement and knowledge (training, time, money) through the SCP
- SCPRBT7 LAs share equipment (network, IT, computers) through the SCP
- SCPCCT8 LAs reduces (procurement) organisational risks by outsourcing to the SCP
- SCPTC7 LAs reduces failures in the procurement procedures through the SCP
- SCPRBT6 LAs have better relationships with suppliers through the SCP

Research questions

Multiple regression analysis explains in this research how much of the variance in the dependent variable Resource sharing (internal) by the SCP can be explained by the

independent variables. It also provides an indication of the relative contribution of each independent variable. This has been translated into several statistical research questions.

Research question I:

How well do the measures of 16 independent variables/items predict perceived "resource sharing & business capabilities"? How much variance in perceived "resource sharing & business capabilities" can be explained by scores on these scales?

Research question II:

Which is the best predictor of "resource sharing & business capabilities"?

To explore these two questions, a standard multiple regression will be executed. This model includes variables/items that were uncovered using factor analysis in section 0.
The procedure used to conduct this analysis is taken from Pallant (Pallant, 2010, pp. 153-162).

Checking assumptions

Multiple regression is one of the most exacting statistical techniques (Berenson & Levine, 1996, pp. 714-785). Therefore, appropriate application depends on starting with an analysis of a set of assumptions, which are necessary for a regression and correlation analysis (Berenson & Levine, 1996; Pallant, 2010; Tabachnick & Fidell, 2006). The five major assumptions are normality, homoscedasticity, independence of errors, linearity and (no) multicollinearity.

To determine these assumptions, the data have to be checked for outliers, normality, homoscedasticity, independence of residuals and linearity. The normal probability plot of the regression standardised residual and the scatterplot were investigated. The P-P plot in Figure 4-6 shows a reasonably straight diagonal line from the bottom left to the top right. This indicates no major deviations form normality. Homoscedasticity testing requires the variation around the line of the regression to be constant for all values of X. Also, the scatterplot in Figure 4-7 showed no systematic pattern to the residual values. Correspondingly, as per Tabachnick and Fidell (2006) outliers are defined as more than 3.3 or less than 3.3. The scatterplot shows a minimal presence of outlying residuals of more than 3.3 or less than -3.3.

For controlling multicollinearity, the variance inflationary factor (VIF) and tolerance are checked for each explanatory variable. If a set of explanatory variables are uncorrelated, then the VIF will be equal to 1. If the set is highly intercorrelated, then VIF might even exceed 10. Marquardt (1980) suggests that if VIF is > 10, there is too much correlation between one variable and the other explanatory variables. However Snee (1973) suggests a more conservative criterion that would imply alternatives to least squares regression if the maximum VIF were to exceed 5. Examining the data of factor 1, 'resource sharing & business capabilities', in Table 4-21, (2 < VIF < 6). It can be concluded that there is no reason to suspect any multicollinearity for the variable resource sharing.

The parameter tolerance has been checked on the value > 0.10. If not, this indicates high multiple correlations with other variables, suggesting the possibility on multicollinearity. The tolerance in Table 4-21 is > 0.10.

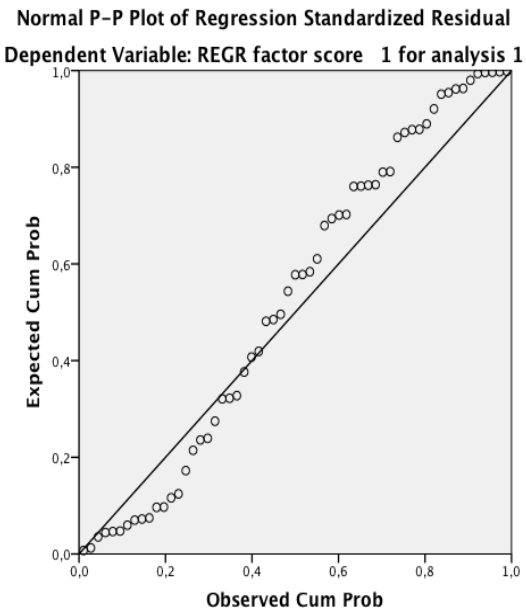


Figure 4-6 Normal P-P Plot of Regression

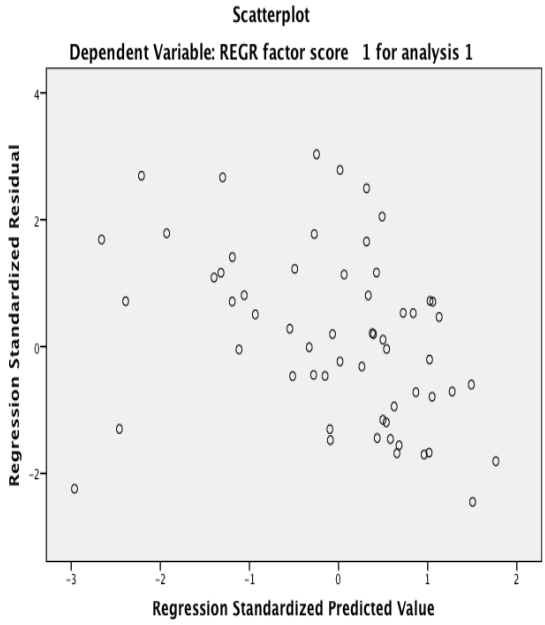


Figure 4-7 Scatterplot

Evaluating the model

The second step in the multiple regression procedure of Pallant (2010, pp. 160-161) starts with analysing the model summary, as viewed in Table 4-19. The R Square and Adjusted R Square present a high value of 0.901 and 0.864, explaining 90.1% and 86.4% of the variance in perceived "resource sharing & business capabilities". In this

study, the objective of this analysis is to determine which predictors are statistically significant and how changes in the predictors relate to changes in the response variable; R-squared is therefore relevant (Berenson & Levine, 1996; Green & Salkind, 2014).

Nevertheless, the regression equation with all sixteen strength predictors was significantly related to the "Access to professional Public Procurement knowledge (internal) by the SCP" index, where R2 =0.90, adjusted 0.86 (see Table 4-19).

Table 4-19 Model Summary Regression

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.949[a]	.901	.864	.37517673
a. Predictors: (Constant), SCPRBT6, SCPCCT8, SCPRBT4, SCPRBT1, SCPRBT9, SCPRBT7, SCPRBT2, SCPTC7, SCPRBT8, SCPAT11, SCPRBT5, SCPRDT1, SCPRDT7, SCPCCT4, SCPTC11, SCPRBT3				
b. Dependent Variable: FAC1_1				

In Table 4-20, the statistical significance of the result has been checked. The model reaches statistical significance at $p< .0005$. Besides this, the df is equal to the number of independent variables.

Table 4-20 ANOVA Analysis

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	54.023	16	3.376	23.988	.000[b]
	Residual	5.912	42	.141		
	Total	59.935	58			
a. Dependent Variable: FAC1_1						
b. Predictors: (Constant), SCPRBT6, SCPCCT8, SCPRBT4, SCPRBT1, SCPRBT9, SCPRBT7, SCPRBT2, SCPTC7, SCPRBT8, SCPAT11, SCPRBT5, SCPRDT1, SCPRDT7, SCPCCT4, SCPTC11, SCPRBT3						

Evaluating each of the independent variables

The value of the variables in Table 4-21 are checked first in the column marked sig.. This value must be less than 0.05 so the variable makes a significant and unique contribution to the prediction of the dependent variable.

The marked variables make a significant and unique contribution to the prediction of the

dependent variables. Thereafter, it is interesting to compare the contribution of each independent variable where the Beta of the marked variables has been checked.

Table 4-21 Coefficients

Coefficients[a]													
Model		Unstandardised Coefficients		Standardied Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-3.367	.223		-15.121	.000	-3.816	-2.918					
	SCPRBT2	.285	.058	.475	4.943	.000	.168	.401	.791	.606	.240	.255	3.928
	SCPRBT3	-.019	.063	-.035	-.297	.768	-.145	.108	.722	-.046	-.014	.174	5.762
	SCPRBT1	.335	.053	.460	6.378	.000	.229	.441	.750	.701	.309	.451	2.217
	SCPRBT5	-.003	.051	-.005	-.065	.949	-.106	.100	.624	-.010	-.003	.371	2.697
	SCPRDT1	.025	.059	.038	.430	.669	-.094	.145	.675	.066	.021	.300	3.328
	SCPTC11	.183	.069	.258	2.639	.012	.043	.324	.703	.377	.128	.246	4.059
	SCPAT11	-.036	.044	-.067	-.823	.415	-.125	.052	.608	-.126	-.040	.356	2.812
	SCPCCT4	.112	.063	.163	1.770	.084	-.016	.239	.643	.264	.086	.277	3.611
	SCPRDT7	-.140	.065	-.208	-2.168	.036	-.271	-.010	.508	-.317	-.105	.256	3.905
	SCPRBT4	-.134	.051	-.215	-2.611	.012	-.237	-.030	.472	-.374	-.127	.348	2.878
	SCPRBT9	-.015	.049	-.023	-.315	.755	-.114	.083	.562	-.048	-.015	.444	2.250
	SCPRBT8	.095	.042	.171	2.270	.028	.011	.179	.534	.331	.110	.414	2.415
	SCPRBT7	.060	.038	.118	1.554	.128	-.018	.137	.560	.233	.075	.407	2.457
	SCPCCT8	.052	.042	.096	1.225	.228	-.033	.137	.551	.186	.059	.381	2.624
	SCPTC7	-.003	.056	-.005	-.058	.954	-.116	.110	.571	-.009	-.003	.301	3.320
	SCPRBT6	-.079	.047	-.122	-1.676	.101	-.174	.016	.411	-.250	-.081	.444	2.253
a. Dependent Variable: FAC1_1													

Recap

Multiple regression analysis was conducted to evaluate how well the strength measures predicted the "resource sharing & business capabilities" variable. Six variables made a significant and unique contribution to the prediction of "Access to Professional Public Procurement Knowledge (internal) by the SCP" (Question 1).

The best predictor of "Access to Professional Public Procurement Knowledge (internal) by the SCP" is SCPRBT2, where $b^* = 0.475\ 0$ (Question 2). Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity. After entry of the six variables at the second step, the total variance explained by the model as a whole was 90.1%, where F (16,42) = 23.99 and $p < .001$.

In the final model, SCRBT2 and SCPRBT1 have strength relations with Factor 1, resource sharing, and are determined explainable in this latent variable. SCPRBT2 (b^* 0.475, $p < .001$), *access to dedicated personnel to manage the collaborative process*,

has been recognised by the LAs as the most significant value of the dimension resource sharing of the SCP to perform the procurement function. SCPRBT1 (*b** 0.460, $p < .001$), *structurally using cross-organisational teams of the SCP for process design and improvement in procurement projects*, have been seen by the LAs as the second most significant value of the dimension resource sharing produced by the SCP.

SCPTC11, SCPRBT4, SCPRDT7 and SCPRBT8, are excluding deeper determined in this latent variable, Factor 1, resource sharing & business' capabilities.
SCPTC11 (*b** 0.258, $p < .001$), uniformity in the procurement services of the SCP
SCPRBT4 (*b** 0.215, $p < .001$), LAs have access to dedicate personnel to manage the collaborative process.
SCPRDT7 (*b** 0.208, $p < .001$), LAs have more availability of procurement practitioners of SCP and therefore less needs of external consultants.
SCPRBT8 (*b** 0.171, $p < .001$), SCP causes for more exchange of capacity, knowledge and training between LAs.

Multiple regression
In this section the output of the regression analyses for the other five dimensions is summarised in line with Pallant (Pallant, 2010, pp. 153-162). The corresponding analyses have been included in Appendix XIII.

Table 4-22 Multiple regression Model Dimension Coordination Mechanism

Model/Item	Model Coordination Mechanism	SCPAT1	SCPAT2
R	.851		
R2	.724		
Adjusted R2	.714		
Std. error of the estimate	.525		
F	73.490		
Sig.	.000	.000	.011
β		.662	.250

- SCPAT1, LAs have agreed procurement goals and strategies in the SCP.
- SCPAT2, LAs have agreements about how to execute joint procurement groups in the SCP.

Table 4-23 Multiple regression Model Dimension Procurement Costs

Model/Item	Model Procurement Costs	SCPTC3	SCPTC6
R	.856		
R2	.733		
Adjusted R2	.683		
Std. error of the estimate	.554		
F	14.912		
Sig.	.000	.000	.050
B		.552	.262

- SCPTC3, LAs have fewer management costs for the procurement function through the SCP.
- SCPTC6, External-independent costs of legal know-how of procedures or contracts.

Table 4-24 Multiple Regression Model Dimension Agility & Flexibility

Model/Item	Model Agility & Flexibility	SCPCCT1	SCPCCT6	SCPTC8
R	.874			
R2	.764			
Adjusted R2	.746			
Std. error of the estimate	.502			
F	43.587			
Sig.	.000	.000	.000	.046
β		.370	.428	.169

- SPCCCT1, LAs have quicker, new and innovative product/services through the SCP.
- SPCCCT6, LAs has more access for innovation in their products/services/works by outsourcing the procurement function by the SCP.
- SCPTC8, LAs has shorter cycle time during execution of procurement procedures by the SCP.

Table 4-25 Multiple Regression Model Dimension Uncertainty

Model/Item	Model Uncertainty	SCPRDT8	SCPRDT10	SCPRDT9	SCPRDT6
R	.898				
R2	.807				
Adjusted R2	.781				
Std. error of the estimate	.402				
F	30.468				
Sig.	.000	.000	.032	.001	.034
β		.505	.216	.397	.239

- SCPRDT8, LAs together have more volume in the market through the SCP.
- SCPRDT10, LAs use the legitimacy of the SCP.
- SCPRDT9, LAs hitchhike on the collaborative brand of the SCP.
- SCPRDT6, Procurement processes are more transparent through the SCP.

Table 4-26 Multiple Regression Model Dimension Control of Information

Model/Item	Model Control of information	SCPAT6	SCPAT8
R	.867		
R2	.752		
AdjustedR2	.739		
Std. error of the estimate	.526		
F	55.739		
Sig.	.000	.000	.004
β		.521	.290

- SCPAT6, LAs make annual joint procurement plans with the SCP.
- SCPAT8, LAs jointly decide the exceptions and deviations about the joint procurement plan.

4.4.10 One-Way Multivariate Analysis of Variance (MANOVA)

Tabachnick and Fidell (2006) suggest conducting an independent-samples t-test to compare the mean scores of different groups or conditions. For more than two groups, Pallant (2010, pp. 203-205) recommends using the analysis of variance, MANOVA. For this research, it is interesting to see if the respondents of the LAs differ in their responses. In this phase of the study, quantitative data have been separated in several groups, presented below in Table 4-27.

Table 4-27 Population Groups

D1Profession:	*Which key commodity are you executing in your profession?*	
	1 = Financial	
	2 = Infrastructure works	
	3 = Social Domain	
	4 = Other	
D2Function:	*In which organisational level are you executing your profession?*	
	1 = Policy	
	2 = Operation	
	3 = Tactical	
	4 = Management	
D3Frequence:	*How often do you deal with procurement issues in your organisation?*	
	1 = Never	
	2 = Rarely, half yearly	
	3 = Sometimes, monthly	
	4 = Often, daily	
D4Inhab::	*How many inhabitants has your LA or service area?*	
	1	*0 - 15,000*
	2	*15,001 - 25000*
	3	*25,001 - 35,000*
	4	*35,001 - 50,000*
	5	*50,001 – 65,000*
	6	*65,001 – 100,000*
	7	*> 100,001*

One-way between the above mentioned groups multivariate analysis of variance was performed to investigate D1 profession, D2Function, D3Frequence, D4Inhab. Preliminary assumption testing was conducted in earlier paragraphs to check for normality, linearity, homogeneity of variance and covariance matrices. No serious violations were noted.

MANOVA has been tested on the variable/items with the highest multiple regression analysis of the early dimensions. These dimensions have been determined by factor

analysis, conducted in paragraph 3.8. These analyses have been included in Appendix XIV. Table 4-28 shows the results of these MANOVA analyses.

Table 4-28 Finding MANOVA Analyses

Dimension	Findings MANOVA analyses
Resource sharing & business capabilities	D4Inhab: The "Inhab group was significantly different from each other. Wilk's Lambda value, shown in Appendix XIV of .789 with a significance value 0.017. This is less than 0.05; therefore there is a statistically significant difference between the number of inhabitants of the LAs and the contribution of resource sharing by the SCP for the LA.
Cost reduction	The 'Frequency' group was significantly different from each other. Wilk's Lambda value, shown in Appendix XIV, was 0.844 with a significance value 0.029. This is less than 0.05; therefore there is a statistically significant difference between how often the respondents are dealing with procurement of the LAs and the contribution of cost reduction by the SCP for the LA.
Uncertainty	The groups were not significantly different from each other.
Co-ordination mechanism	The groups were not significantly different from each other.
Agility & flexibility	The groups were not significantly different from each other.
Control of information	The 'Inhab' group was significantly different from each other. Wilk's Lambda value, shown in Appendix XIV, was 0.714 with a significance value of 0.010. This is less than 0.05; therefore, there is a statistically significant difference between the number of inhabitants of LAs and the contribution of transparency of information by the SCP for the LA.

4.5 Summary

In this quantitative part of this mixed methods research, the observations of the qualitative research, interviews and documents have been studied in a larger population in the Netherlands. This section presents the findings from the quantitative data.

One of the interesting findings of this research are the dimensions, mentioned in Table 4-29, which interrelated variables to investigate concepts/dimensions. The latent factor analyses established clusters of groups of variables, which tended to bunch together (Green & Salkind, 2014, pp. 282-292).

Table 4-29 Findings Latent Factor Analyses

Dimensions:	Description of the cluster of variables belonging to the dimension
Resource sharing and business capabilities	⇒ More access to professional procurement: (special) experts, in collaboration, at LA locations, legal, innovation, helpdesk, technical sharing, training, procurement IT, indirectly training, and standardisation.
Cost reduction	⇒ Less procurement management costs through outsourcing, lower transaction costs, less external costs, lower IT procurement costs, less contract management costs.
Uncertainty	⇒ More buying power, 'hitchhike' onto collaborative brand, legitimacy, more transparency, less depended on monopolists, more control of information, and more awareness of alternative specifications.
Coordination mechanism	⇒ Effective and effectively SCP by covenants on procurement goals and strategies, guidelines about executing JPGs.
Agility and flexibility	⇒ Faster innovative product/services, extending flexibility and agility in procurement services, outsourcing procurement function SCP to gain flexibility of services, shorter cycle time of procurement projects by SCP.
Control of information	⇒ Jointly drawn up, using procurement plans; joint decisions about mutations and exceptions of procurement plans.

The understandings of the experts responsible for procurement functions in their organisations who completed the questionnaires provide a general objective insight into the output of SCP.

The multi-regression analysis provided the variables, which stipulated the relationship with the hypothesis constructed in chapter three. The analysis indicated a statistically significant difference of $p < .05$ among the measured variables, which are linked to the dimensions and related to the hypotheses. This was used to test the predictive power of the set of variables and to assess the relative contribution of each individual variable in the dimensions between the contexts of the hypotheses. Table 4-30 shows the multi-regression findings linked with the most powerful variables to the corresponding dimension, exploratory to the hypothesis.

Table 4-30 Hypotheses and Multi Regression

Hypothesis		Dimension	Variable	R2	β	σ
I	*Structural* collaborative procurement has a significant positive effect on collaborative benefit as measured by coordination	Coordination mechanism	SCPAT1	.724	.662	.000
			SCPAT2	.724	.250	.011
II	The collaborative benefit has a significant positive effect on procurement performance of the individual local government organisations	Resource sharing/ Business capabilities	SCPRBT2	.901	.475	.000
			SCPRBT1	.901	.460	.000
			SCPTC11	.901	.258	.012
			SCPRDT7	.901	.208	.036
			SCPRBT4	.901	.215	.12
			SCPRBT8	.901	.171	.28
		Procurement costs	SCPTC3	.733	.552	.000
			SCPTC6	.733	.262	.050
		Agility and Flexibility	SCPCCT1	.764	.370	.000
			SCPCCT6	.764	.428	.000
			SCPTC8	.764	.169	.016
		Uncertainty	SCPRDT8	.807	.505	.000
			SCPRDT10	.807	.216	.032
			SCPRDT9	.807	.397	.001
			SCPRDT6	.807	.239	.034
III	*Coordination* between structural collaborative procurement and the individual local government organisation moderates the procurement performance of a local government organisation measured by planning instruments	Control of information	SCPAT6	.752	.521	.000
			SCPAT8	.752	.290	.004

Structural collaboration has a significant positive effect on collaborative benefits. Commitment to strategic and tactical procurement objectives are indispensable for an effective and efficient SCP. In successive order of importance are joint agreements about procurement policy, goals and strategy and a guideline of execution collaborative

arrangements. These techniques are characteristic of structures in collaborative arrangements.

The dimensions of 'Resource sharing & Business capabilities', 'procurement costs', 'agility & flexibility' and 'uncertainty' contribute to *positive effect on procurement performance* of the LAs' collaborative arrangements. The valuable output of the SCP for the LAs was predicted through the set of variables in the multi-regression analysis. These variables cover the dimension *Resource sharing/Business capabilities*, in order of decreasing strength: access to professional procurement experts for executing collaborative procurement arrangements, access to innovative & product development collaborative projects, extending of uniformity & standardisation in the procurement function, more exchange of procurement capacity, less dependent on external procurement consultants, and sharing procurement knowledge between LAs. These variables have been predictable for improving procurement performance.

For the dimension *procurement costs*, the connected variables in order of decreasing degree of strength are: reduction of the management costs of the procurement function in the LAs, and less hiring of external procurement legal capacity in the procurement process. For the dimension *agility & flexibility*, the connected variables in order of decreasing strength are: innovation and product development are faster implemented, and more innovation have been realised and lead-times are shorter. The last dimension forming a part of the second hypothesis is *uncertainty*. The connected variables in order of decreasing strength are: jointly larger volume leads to stronger buying dominance, piggybacking on the SCP's ensured unambiguous appearance. This also ensured a legitimising effect of excellence to internal stakeholders. The last variables, and thus less determined, procurement processes, had been executed by the SCP with greater transparency. The last dimension has been theoretically substantiated by the RBT. The quantitative data set generalised for this hypothesis the contribution of the SCP for LAs.

The dimension *control of information* has an effect on the coordination between structural collaborative procurement and individual LAs. It moderates the procurement performance of local government organisations and is measured using planning instruments. Coordination between the SCP and the LAs has been predicted through the set of variables in the multi-regression analysis. These connected variables for the

dimension *control of information*, in order of decreasing strength, are: prepare collaborative (regional) procurement plans annually and jointly, with the region, decisions on exceptions, and deviations from the joint procurement plan.

The MANOVA analysis provided significant evidence to compare the six dimensions, which are connected with the three hypotheses, on the four single dependent variables: profession, function, frequency, and number inhabitants of the LAs. There was a statically significant difference between:

- the number of inhabitants of the LAs and the *contribution of Resource sharing & Business capabilities* by the SCP for the LAs;
- how often the respondents deal with procurement of LAs and the contribution of *cost reduction* by the SCP for LAs;
- the number of inhabitants of LAs and the contribution of *control of information* by the SCP for LAs.

In the next chapter, the two databases are narratively compared and integrated, to extend the initial qualitative exploratory findings with the inclusion of the quantitative findings. Followed up, with solo quantitative discussion.

Chapter 5. Discussion

5.1 Introduction

In Chapter 5 the quantitative findings are explained and illustrated in relation to the qualitative findings and the literature. The qualitative and quantitative strands have been brought together to compare the findings from the qualitative (interviews and case study) and quantitative (questionnaire) data sources and finally confronted with the hypotheses. It involved collecting both types of data at different times; assessing the information using parallel constructs for both types of data; separately analysing both types of data; and comparing the results through procedures such as side-by-side comparison in discussions, transforming the qualitative data set into quantitative scores, jointly displaying both forms of data and drawing conclusions.

In this chapter, the findings from the research are analysed in relation to the literature and the theoretical foundation. It therefore begins again with the configuration of the research objectives and the conceptual research framework. This chapter draws on the key findings from Chapter 4, including the qualitative detail in phase I and the quantitative detail in phase II. The results will determine whether or not the research has added to the existing body of knowledge.

Grounded in the theoretical framework outlined in chapter 2, the main research objectives and problem statements, initially presented in Chapter 1, will now be addressed. Section 1 of this chapter starts with attaching the PP of the LAs and SCP in conceptual framework and outlines the preliminary findings.

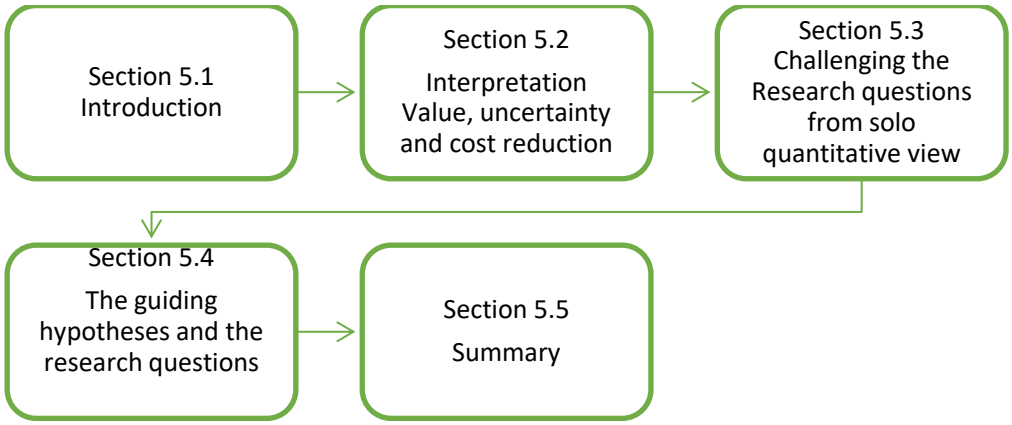


Figure 5-1 Outline of Chapter 5

Section 2 will discuss and interpret the research objectives and the recognised actors, section 3 will look at the findings from a quantitative perspective, before finishing by testing the hypotheses in section 4.

5.1.1 Procurement performance of SCP conceptual framework

A precursory conceptual framework-procurement model was set out in chapter 3. This model was developed to give direction to this study. Van Weele (2005, p. 256) proposed a model for purchasing performance. Li, Ragu-Nathan, Ragu-Nathan, and Subba Rao (2006) measured the effect of organisational performance using both economic and market criteria, including return on investment, market share, profit margin on sales, growth of return on investment, progress of turnover, growing market share, and overall competitive position. Both studies developed or used models created to measure procurement and organisational performance in the private sector.

In Figure 5-2, a breakdown is given of the refined research objectives, *value, uncertainty and cost reduction*, regarding the concepts of efficiency and effectiveness – the theoretical paradigm of this study (Barnett et al., 2010). In the next section, these subdivisions will guide the discussion.

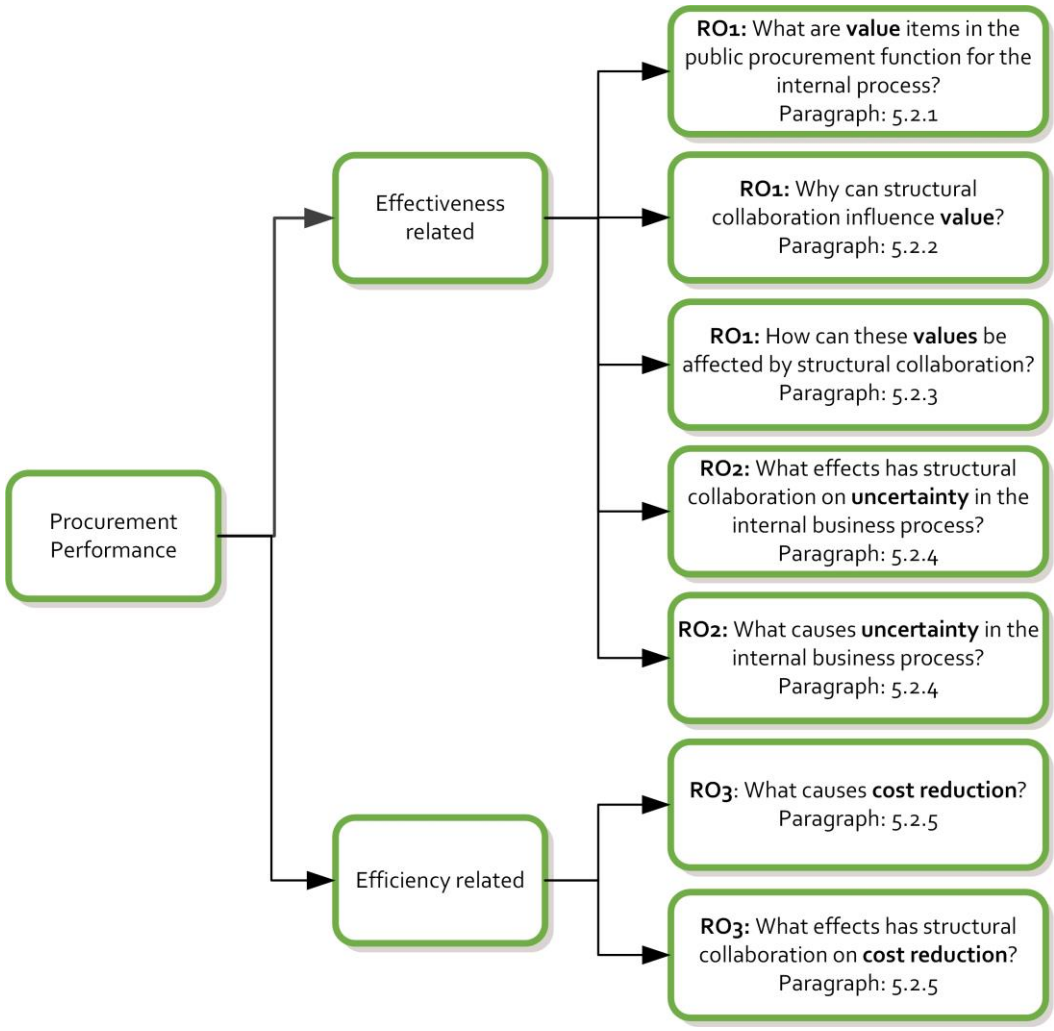


Figure 5-2 **Research Objectives Linked to Procurement Performance and the Paragraph**

5.1.2 Preliminary findings

Business and organisation research is mostly centred on qualitative studies to study real phenomena. In the case of this research, a mix of several different research approaches has been chosen (G. J. Murray, 2009; Van Weele, 2007).

The findings of this study indicated that the procurement performance that LAs receive from collaboration meet the expectations of the performance of the SCP organisation (resource sharing, reducing internal costs, more value, transparency). In addition, fragmented or double organised procurement functions of several collaborative public organisations in existing regions contribute to the performance of the SCP, leading to more synchronisation of goals, procurement plans and strategy. Friction can be caused by outsourcing procurement activities versus insourcing (Bals & Turkulainen, 2017)

and a lack of coordination mechanisms (Meehan et al., 2016) between the activities of the collaborative partners of LAs in a particular region.

The findings of this study indicate the consequences of extending the participants in JPGs - a collaborative protocol contributes to less inefficiency in joint purchase groups. The contribution of more standardisation of processes, exchanging technical expertise and pooling procurement expertise suggests more effectiveness and efficiency in the procurement function of LAs.

SCP has been found to accelerate innovation in public products and services. This research indicates that by outsourcing the procurement function to the SCP, LAs have more access to innovative products and services. This study explains the contribution of the procurement performance of LAs through collaboration by linking the primary and secondary data with the existing academic literature.

5.2 Interpretation and Reporting

The first research objective of this study focuses on the *value* for internal business processes that are influenced by SCP. Notwithstanding the emerging meaning of value of shared procurement services for the internal business processes for individual LAs (Richter & Brühl, 2017) there has been no investigation of the outcome of regional shared services of procurement of value in the business processes of their shareholders' organisations in the Netherlands. The findings of this study therefore represent a significant contribution to understanding structural cooperation and the value of in-house procurement functions of regional LAs and the impact on the effectiveness and efficiency of their businesses. This first section uses both the qualitative data and quantitative data to illustrate the important aspects of higher value, less uncertainty, and cost reduction.

5.2.1 What are *valuable* items in the public procurement function for internal process, which can be affected by structural collaboration (RO1)?

RO1 requires an *exploration and analysis* of value items in public procurement for internal processes, which can be affected by structural collaboration.

In a departure from the previous literature, additional tactical values in internal procurement processes indicate human resources, which adds significance to the procurement functions of LAs. Olson (2010) explained that functions may even be outsourced altogether so that the remaining resources can focus on higher-value activities and assets can be redeployed or retired. Olson (2010) asserts that it can be valuable for an organisation to periodically evaluate its the value chain and which activities to insource which to outsource. Often the motivation for outsourcing procurement, like outsourcing in general, is to hand over a non-secondary activity. Other academics Hamel and Prahalad (1990); Teece et al. (1997) assert that resources must add value to business activities. Barney (2001) stated that economies of scale can be valuable resources for organisations if LAs are able to establish strategies that improve their effectiveness and efficiency or offset potential risks.

To understand *value* in this study, firstly the sources for reducing scarcity or enlarging leverage will be recapped. Suggestions of sources of power in previous literature from Chapter Two, include professionalism, reputation, product development, complementary resources, quality of services, information asymmetry, cost-competitiveness and economies of scale. Assuming these features, some SCP organisations gain supplementary procurement performance, expressed in value for the individual LA (Pfeffer & Leong, 1977; Pfeffer & Salancik, 1978).

Figure 5-3 shows the valuable items for the LA, which can have an effect on the business procurement processes and accordingly the procurement performance of the LA(White et al., 2016; Zheng, Knight, Harland, Humby, & James, 2007). The relationship and these effects for this research will be explored in following paragraphs. Figure 5-3 provides an overview of these recognised value items from the previous literature and this study.

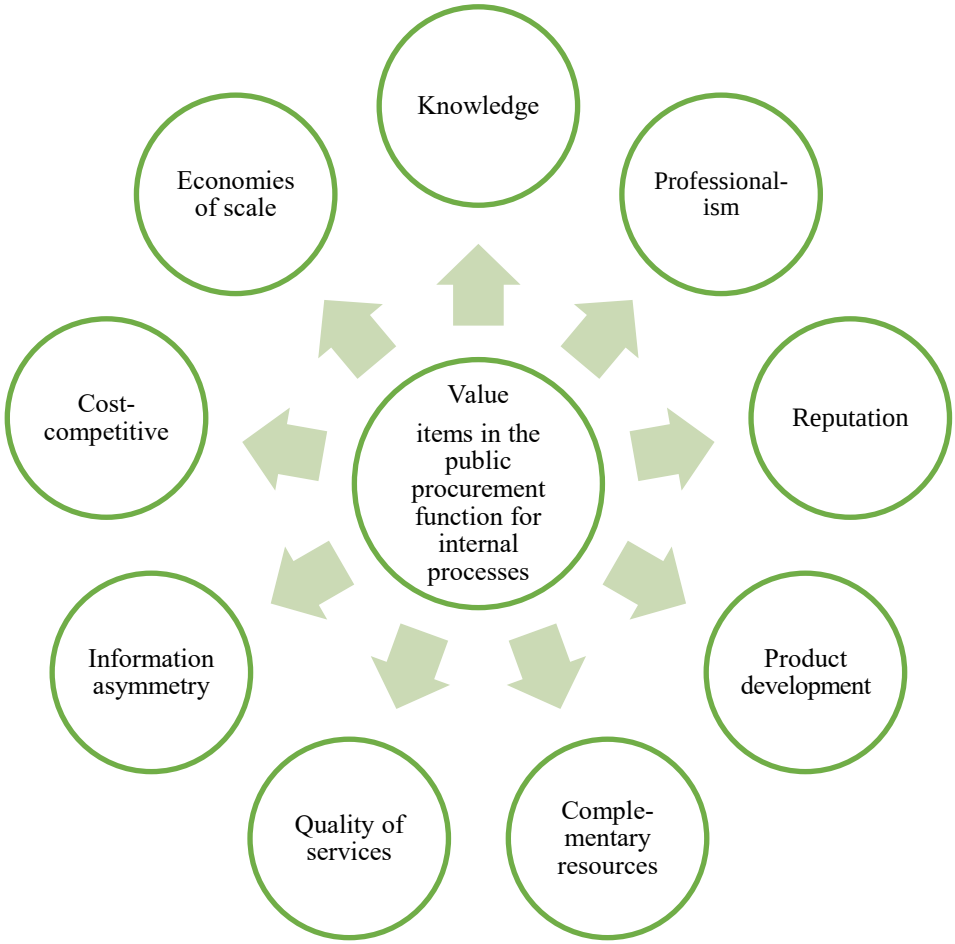


Figure 5-3 Value Items of SCP Affecting the PP

Economies of scale

Organisations streamline their value chains by organising activities either within or outside the group, facing the make-or-buy question (Williamson, 1981). Previous researchers showed that aggregation allows improvements in procurement performance to extend beyond individual procurement performance to LAs. The procurement organisation facility increases in extent. The average execution cost per LA decreases because each new LA absorbs part of the fixed costs of the procurement projects or operation, and coordination costs in the chain can be diminished. This is assuming that larger firms would be more efficient and labour is more specialised than in smaller firms, as stated by the TCT (Coase, 1937; Williamson, 1985).

This can create economies of scale and opportunities for learning from each procurement activity to another. These potential benefits content economies of scale in sharing procurement organisation costs, economies of skills, economies of learning and

economies of scope. This can be explained by several theories as transaction cost economics theory and resource-based view theory (Arnold, 1996; Tella & Virolainen, 2005).

Waller (2003, pp. 770-771) argued, in contrast with economies of scale, for diseconomies of scale whereby the average cost increases with output. This might arise because the SCP is working for too many LAs or there are too many procurement consultants at the SCP and management therefore becomes complex. Economies of scale will be given in several fields, because these have an effect on value items whereby up-scaling has contribution to the fixed costs per LA, because each new LA absorbs part of those costs (Waller, 2003, p. 868).

The advantages of economies of scales were ranked highly in the findings from the qualitative component of this study. Researchers in the field of procurement identified economies of scale as value caused through collaboration, savings in buying prices (Kastanioti et al., 2013), standardisation of services, improvement of service delivery, upgrading e-procurement systems (Borman & Janssen, 2013), access to professional procurement personnel, suppliers' continuous improvement capabilities, and better technology utilisation (McIvor et al., 2011), which is generally in line with the findings of this study. Paagmana, Tateb, Furtmuellerc, and DE Bloomd (2015) found that their target group attributed no value to SSCs in relation to item innovation. This is in contrast with the research group of this study, SCPs.

Previous researchers, including Janssen and Joha (2008), stated that shared services do not add value through simple cost-cutting initiatives like outsourcing but by turning support activities into core activities as well, which results in new services for the shared services. Tynkkynen et al. (2013) discovered demand for exclusive public procurement services because of the difficulty of the procurement process in litigated public procurement cases. However, the private service market is developing to more larger general service providers, therefore a public SCP or SCC can be considered.
One interpretation could be that economies of scale in this study are not isolated solely to cost reduction. Besides the hard cost reduction findings of the document analyses, the qualitative and quantitative findings also support a positive effect of economies of scales to paybacks, as discussed in this section and summarised in Table 5-1.

Table 5-1 Economies of scale - Support, Disagreements, and Contributions

Author	Main research topic	Support, disagreements, and contributions
Williamson (1981)	Transaction costs theory is applicable for each organisation but must be tailor-made for each individual situation.	The study contributes the effects on economies of scale.
Arnold (1996)	Introduced horizontal cooperation as a definition of purchase consortiums between companies or departments.	These findings are further developed on his thoughts about collaboration, but more grounding focused on optimal performance for the LAs.
Kastanioti et al. (2013)	Cost savings by centralisation of procurement tenders in the health sector.	This study shows financial savings from economies of scale through collaborative procurement.
Borman and Janssen (2013)	Economies of scale in transactions have been recognised as critical success factors in SSC.	These findings argue for a broader value scope of economies of scale for SCP and challenge economies of scale with collaboration of scale.
Tella and Virolainen (2005)	Economies of scale are found due to increased negotiation power, which directly affects prices and is caused by a lower volume of transactions, which are related to purchasing activities.	These examinations confirm a partly lower volume of transactions and extend the value of economies of scale to resource sharing, product development, and reputation, quality of services, information asymmetry, and professionalism.
McIvor et al. (2011)	Argues for diseconomies of scale to have attention for the failure to implement a standardised approach. This will hinder an organisation from fully leveraging the specialist capabilities of contracted suppliers.	This research supports the differentiated supplier approach for contracting and indicated this as a value which can be extended by SCP.
Janssen and Joha (2008)	Collaboration reduces diversity, avoids replication of energies, and finally results in cost reductions. In addition,	The study's findings support this earlier research whereby economies of scale have been further recognised rather than

Author	Main research topic	Support, disagreements, and contributions
	bundling services resulted in economies of scale.	cost reductions alone.
Paagmana et al. (2015)	They argued about the real cost reductions from economies of scale, especially in smaller collaborative organisations, whereby departments are obliged.	Economies of scale have been acknowledged as the main finding of this study; the area of institutionalisation was not researched.
Meehan et al. (2016)	Up-scaling leads to monopolistic suppliers, with nationally consolidated volumes and consequences such as damage to supply chains and product development/innovation.	Regional up-scaling in the structural approach leads to greater supply-demand balance.
Economies of scale	**This study's definition**	**Grounded on the findings and paradigm of economies of scale – lower unit costs through use of larger facilities. This has been defined as more value for the LAs, proven by key performance indicators, which can be affected by up-scaling through structural collaborative procurement.**

Knowledge

Sharing and extending knowledge has been embraced by the literature and the primary findings of this study. Also the CEOs interviewed mentioned that knowledge encourages people to think and interact to improve production processes, and is strongly linked to increased productivity. The key will be that an organisation can accumulate knowledge, and contribute to the main goal of the organisation. The central objective related to this section is – can knowledge, multiplied by structural collaboration, be recognised as value for LAs?

Previous literature viewed knowledge in the field of collaborative procurement mostly on a tactical level. Meehan et al. (2016) mentioned insufficient sharing of knowledge and experience in operational practice and in forthcoming tenders. They found in their research that technical information is shared across technical collaborative forums and

networks but procurement is not involved in many of these technical forums. Technical staff were found to not be involved in regional procurement meetings. Meehan et al. (2016) concluded that business challenge is missing in the procurement processes.

In general, the study's findings do not support the research of Meehan et al. (2016). In this research, the outcomes of the regression analysis support "*the expertise/knowledge value of dedicated personnel to manage the collaborative procurement processe*s" (regression b* 0.475, p< .001), by strong relation with resource/knowledge sharing. Also, the outcome of the regression analysis support, *"LAs share technical knowledge by the SCP"* (regression b* 0.215, p< .01), does not support the findings of Meehan et al. (2016).

Paagmana et al. (2015) found in their research supporting motives for the exchange of internal capabilities by easily operating together. They link the value of knowledge directly to the general goal: deliver the services they are legally obliged to offer citizens and business, which was probably not capable without SSC. Comparing this with Meehan et al. (2016) and the present research, structural collaboration and SSC are structured organisations with the commitment of policymakers and the board (Borman & Janssen, 2013; McIvor et al., 2011).

Bordass and Leaman (2013) suggest gathering and maintaining knowledge of professionals in public procurement. They state that it is especially important for professionals not to lose their knowledge when they jump into new projects. In this study, initial analyses exposed that procurement knowledge is more secured for LAs by the SCPRDT7 (regression b* 0.208, p< .036) – *LAs have more access to professional procurement experts and less external by the SCP*. The triangulation of this research supports this finding: the interviewees were unambiguous that SCP values *access to expertise and knowledge*. Knowledge and expertise were identified as value. In the interviews with the expert group, the interviewees highlighted the characteristics of knowledge and expertise.

The knowledge and expertise of the SCP covers knowledge of clear and functional specifications of programme of demand (Al-Karaghouli, Ghoneim, Sharif, & Dwivedi, 2013; McIvor et al., 2011), leverage information, market knowledge (Malhotra, Gasain,

& El Sawy, 2005), knowledge about the demands of the LAs, and how to integrate and apply new knowledge to LAs (Cao & Zhang, 2011).

The findings from the study and the interviews demonstrate the exchange of specifications and experiences of products and services; these have been seen as contribution to achieving improved qualitative specifications:

"*Sharing material expertise of LA in joint purchase groups empowers quality".*

Interviewees A, C, D, F, G and H

"[The] commodity approach is very functional to get access to technical and operational information".

Interviewees A, D, G and H

Moreover, the findings from the qualitative interview are supported:

"Procurement knowledge and expertise are necessary for small LAs; civil servants are too generally skilled, therefore procurement cooperation is valuable for us".

Interviewees A, B, C, D, E, F, G and H

"[It is] necessary at the start to develop a fundamental procurement attitude, civil servant has learned 'on the job', the procurement skills of the professional of the collaborative organisation".

Interviewees A,B,C,D,E,F,G and H

These comments support the findings of Lu, Meng, and Goh (2014) findings. Their results explained that knowledge transfer depends on features of knowledge. Moving tacit knowledge would be more difficult than obvious knowledge because it is neither urgent nor indispensable. Some of the interviewees mentioned:

"*Civil servants must do most of the procurement activities as part of their primary function"*.

Interviewees A, C, and E

Harland et al. (2005) mentioned in their study that there is a difficult decision regarding how “close to core” outsourcing should be. Some organisations choose to retain some capability and capacity in-house and outsource part of an activity. McIvor et al. (2011) suggest engaging key stakeholders in key project decisions to win support for proposed sourcing options.

Recent branch research from a Dutch public knowledge centre (Faasse & Koens, 2017) demands attentiveness to the decentralisation of central government tasks to LAs in relation to accessibility of knowledge in their health and youth care. In an earlier situation, those forms of knowledge were available at national public knowledge organisations. Those organisations are not decentralised. Faasse and Koens (2017) indicated the risks where individual LAs have to “do it themselves”, with the probability that research will be done twice, or perhaps, on the LA level not be executed. This could mean that knowledge and knowledge sharing is not available for every LA. Exchange and accumulation or multiplication of good and bad practice and knowledge are important for organisations implementing new services (Dewah & Mutula, 2014; Sergeeva & Andreeva, 2015). To prevent sub-optimisation on stage of the LAs, SCPs can take positions in this gap. SCPs must be linked up with a national knowledge-sharing organisation otherwise sub-optimisation will emerge between SCPs.

These findings confirm the added value of procurement knowledge acquisition for the decentralised LAs through the SCP. However, attention must be given to sharing, transferring this exclusive knowledge to the stakeholders, the LAs; the knowledge is passed on to the LA and vice versa, with the responsible national organisations as discussed in this section and summarised in Table 5-2.

Table 5-2 Knowledge - Support, Disagreements and Contributions

Author	Main research topic	Support, disagreements, and contributions
Faasse and Koens (2017)	Focus on decentralisation of (social) care to LAs. They argue that there is a shortage of structural knowledge, caused by temporary financing of resources. Fragmentation in collaboration between sub domains.	Support the need for structural collaborative arrangements and clearness regarding tasks and responsibilities. SCP receives no attention in their research. Strategic procurement is integrated in the policy functions and not mentioned as a profession.
Meehan et al. (2016)	Restrict sharing of knowledge because technical staff has been limited involving JPGs.	SCPs share a great deal of knowledge between their members. Technical staff are involved in JPGs via multi-disciplinary procurement teams.
Paagmana et al. (2015)	Integrative literature review and empirical validation of motives for introducing shared services in government organisations. Exchange of knowledge ranked high.	Supported structural approach by SSC. For mitigation of risks, economies of scale and resources.
Bordass and Leaman (2013)	Evaporation of knowledge of professionals.	SCP gathers experiences and knowledge of procurement projects.
Knowledge	**This study definition**	**SCP has the possibility to gather and share experiences and procurement knowledge between members.**

Professionalism

Do the LAs become more or less professional in the procurement function, by using the SCP? Are LAs better off with regional SCPs or do they not bring the professionalism? Previous literature, most recently Pazirandeh and Herlin (2014), refined the marginal contribution of value-professionalism by collaboration and found differences in the findings in their cases, both positive and negative. They recommended considering the effect of the strategy on all sources of power, substitutability, interconnection, information asymmetry, demanding share, reputation and procurement regulation, to design the process so that latent critical impacts are reduced. These sources of power affect, whether positively or negatively, the perception of professionalism of SCPs

through LAs. White et al. (2016) found that professionalism was hampered by a lack of support in training skills and a personal lack of appreciation of the meaning of continuing professional development in both the public sector and the private sector. Therefore, they suggest that for a full power approach, procurement professionals should be more concerned with their own professional development and that organisations should support their procurement staff in such development. Furthermore, training and education in other disciplines should incorporate exposure to relevant skills and practices. In this study, one of the interviewees mentioned:

"Civil servants, in all several disciplines, have learned from procurement experts, nowadays themselves".

Interviewee E

Absorbing information from procurement experts can be seen as learning on the job; however, this may or may not be sufficient for professionalism. Sporrong and Kadefors (2014) noted that technical staff prefer safe and low-cost methods with a high focus on price, whilst professional procurement staff favours more sophisticated methods.

In this study, initial quantitative analysis revealed that LAs can share procurement knowledge through SCP: SCPRBT8 (regression b* 0.171, p< .28), *LAs pool procurement and knowledge (training, time, money, etc.) by the SCP*. Therefore, SCPRBT8 generalised the early findings of the qualitative research of phase I. This study's initial analysis showed that procurement knowledge is more secured for LAs by the SCP: SCPRDT7 (regression b* 0.208, p< .036) *LAs have more access to professional procurement experts and less external, by the SCP*. This reinforced the recommendation of the research by Murray et al. (2008), who recommended SSC procurement for municipalities to increase the professionalism of their procurement function. Complementary research would be interesting to see how much public procurement spending is channelled through collaborative professional buying organisations such as SCPs (Meehan et al., 2016), especially for national or European policy makers. However, the findings of this study did not provide recommendations but established that LAs have greater access to professional procurement experts through SCPs, as discussed in this section and summarised in Table 5-3.

Table 5-3 Professionalism - Support, Disagreements and Contributions

Author	Main research topic	Support, disagreements, and contributions
Pazirandeh and Herlin (2014)	It was found that in addition to increased volumes, the effect of the strategy on other sources of power such as professionalism is also of importance.	Support the valuable item of professionalism through collaborative arrangements.
White et al. (2016)	Continue development capabilities in order to gain opportunities to make further contributions to organisations' successes of procurement staff and increase professionalism. Full power: individual, procurement departments, and other disciplines.	This encourages and contributes the concept of SCPs. SCPs contain dedicated professionals who are continuously trained on internal and external procurement programs.
Murray et al. (2008)	A procurement-shared service appears to be a practical structural option for smaller councils, whether or not they have access to procurement professionals.	This research contributes evidence to fundamentally cover this proposition and also extend the professionalisation contribution to the total business processes of the LA instead of just the procurement staff.
Professionalism	**This study definition**	**SCP distributes direct and indirect strategic and tactical procurement professionalism within LAs as well for the procurement function as other business functions in the LAs and provide a bridge between national and local 'procurement government'.**

Reputation

Ingold and Leifeld (2014) described reputation as the perceived importance of actors weighed by their colleagues or other stakeholders in a process. The underlying assumption is that performers who have a reputation for being powerful can significantly influence collective decision-making.

LAs gain reputation value when the SCP, in the long term, is a powerful and well-tried organisation. This phenomenon is recognised by stakeholders (Pfeffer & Salancik, 1978). Pazirandeh (2012) and Pazirandeh and Herlin (2014) situated reputation in the

context of the individual buyer. They found in their research that the practice of cooperative purchasing increased the demand share and thus the reputation of buyers. This study found that SCP reputation has been predictable as a source of power that can be explained by the SCP: SCPRDT10 (regression b* 0.216, p< .032), '*LAs use the legitimacy by the SCP*'. Also, the finding SCPRDT9 (regression b* 0.397, p< .001) *'LAs government hitchhike with collaborative brand' of the SCP'*, has been recognised as a predictive variable which constrains the uncertainty from the LA internal business process by hitchhiking on the strong brand of the SCP. Being part of the SCP creates positive perceptions for the stakeholders of the LA. In previous academic studies, membership of an SCP has not been shown as a 'marketing' value instrument for a public organisation.

Earlier external control accountant reports in five LAs in the region Southeast of the Netherlands showed that procurement procedures executed by procurement experts of the SCP were entirely compliant with national and European law. Similar external control accountants have found the procurement procedures conducted in-house by civil servants in LAs to fall short of national and European law (De-Groene-Rand, 2010). In the interviews, numerous interviewees mentioned:

"In the region of Southeast of the Netherlands, several LAs joined the SCP because of [its] reputation and [at the] request of the local council".

Interviewees A, B, C, D, E, F & G

"Hitchhiking on the collaborative brand: request of political council and SME entrepreneurs".

Interviewees A, B, C, D, E, F & G

"Local authorities use the reputation of Bizob for their internal control to be entirely accountable with national and European lawfulness".

Interviewees A, B, C, D, E, F & G

"Large (political) procurement issues control questions of mayors if their SCP has been consulted".

Interviewees A, B, C, D, E, F & G

In contrast with Meehan et al. (2016), legitimation in this study is supported by commitment and alignment at the mayors in fragmented LAs in the region. This can be attributed to the regional restrictions on SCP servicing LAs, which ensures cohesion and togetherness between the members of the SCP and control over several stages and numerous public bodies in the region (Nollet & Beaulieu, 2005). The regional scope of the SCPs is commonly linked to the scope of the LAs within a region from structural safety organisations to environment cooperatives and health services.

In the interviews, it could be seen that connecting with public governance organisations in the same region reinforces the power (Schalk, 2013) and publicity of the SCP, particularly regarding joint procurement issues or those associated with entrepreneurs. Frequently aldermen or mayors of LAs hold board member functions in public governance organisations in the same region, whereby their experiences in the SCP can be applied to that particular public organisation and to other representatives of other LAs (Carpenter, 2010; Van de Laar, 2010). The rate of reputation depends on the performance of the SCP (Pazirandeh & Herlin, 2014). Ingold and Leifeld (2014) stated that to attract more attention and gain a better reputation, organisations must allocate scarce resources. This study supports scarcity, translated to the distinctiveness of value of the procurement performance. This value can be attributed to the scarcity of consolidated procurement volume, power, and transparency of conducting of procurement processes. These values were also confirmed in the quantitative phase of this research: SCPRDT8 (regression b* 0.505, p< .000), *"LAs have together more volume in the market by the SCP"* and SCPRDT6 (regression b* 0.239, p< .034), *"Procurement processes are more transparencies by the SCP"*. The SCP has a distinctive reputation value also on consolidation of procurement volume and transparency. Transparency in procurement processes prevents legal complaints about entrepreneurs, negative external audit commission reports (Trepte, 2004), and finally higher procurement costs and longer cycle times (Loader, 2015).

This study confirms that LAs perceive added value in the 'brand' that the SCP spreads, both to internal and external stakeholders, such as councillors and to a lesser extent entrepreneurs. This is reflected in the professional procurement processes, characterised by transparency, which contributes to the trust of entrepreneurs in professional and business-like LAs, as discussed in this section and summarised in Table 5-4.

Table 5-4 Reputation: Support, Disagreements and Contributions

Author	Main research topic	Support, disagreements, and contributions
Pazirandeh and Herlin (2014)	Demand share by cooperative procurement improves the reputation of the individual buyer.	LAs experience reputation of SCP as value.
Ingold and Leifeld (2014)	Two drivers of influence reputation correspond to political actors, vertical integration into the political system by means of formal authority and horizontal integration into policy-making or implementation through informal collaborations.	SCP is a formal authority with access to formal decision-making; venues are more influential (vertical integration). On the other hand, civil servants with binding decision-making rights are more influential in the negotiation or implementation process (vertical integration), and these actors can gain additional influence reputation by oppressing structural holes in the network (horizontal integration).
Pazirandeh and Herlin (2014)	Reputation has been noticed as a source of power through the consolidation of the demands of collaborative organisations.	An excellent reputation legitimises the influence of vertical integration of professional procurement.
Reputation	**This study definition**	**The experience of LAs in contributing to professional procurement adds to the legitimacy of the SCP. Formal authority is not a guarantee of legitimacy by positive reputation.**

Product development/innovation

In departure from the foregoing research of multiplying innovation through shared or collaborative procurement arrangements, the study operationalised the increased implementation of innovation/product development through SCP.

International agreements have led to national action plans concerning sustainability (Zoeteman, Mommaas, & Dagevos, 2016) and social welfare (Waverijn et al., 2017). This has coincided with the national government decentralising supplementary assignments to LAs (Dijkhoff, 2014). Paagmana et al. (2015) showed that barely ten articles out of 64 reviewed regarded the innovation potential of shared services as a reason for implementation. Meehan et al. (2016) noticed that joint procurement contracts destruct supply chain innovation. Consolidated single-source contracts were

also found to stifle innovation. Fear of being accountable for executing the right procurement procedure, as well as the obligation to their members to get the best technical specifications, leads to organisations missing the local and regional background This conservative approach may result in failing to achieve the organisation's goals.

"Improving sustainability in procurement [is] certainly something we see as [a] value of SCP: Embedding national guidelines such as sustainability and social re-entry of unemployed people, in our local procurement policy and strategy".

Interviewees A, B, C, D, E, F & G

In the interviews undertaken for this research, the LAs were unanimous that SCP brought value in terms of product development and innovation. The difference with Meehan et al. (2016) is that the collaborative procurement organisation researched in this study operates with consolidated spend of LAs in the same region in Southeast Brabant. Passing accountability and securing technical specifications has been perceived as a required normality. This has been reinforced by the quantitative phase in this study: SPCCCT1 (regression b* 0.370, p< .000), "*LAs have quicker new and innovative product/services through the SCP*" and SCPCCT6 (regression b* 0.428, p< .000), "*LAs have more access to innovation in their products/services/works by outsourcing the procurement function through the SCP*".

This research has evinced that innovation can be multiplied through collaborative procurement projects on a regional scale. This contribution to knowledge refines the earlier research of Nollet and Beaulieu (2005), which argued that purchasing groups can act as barriers to new suppliers who provide innovative products. This occurs when collaborative procurement groups tender at the lowest price. Marvel and Yang (2008) also argue about their struggle to innovate as the stiff rebates that establish challengers' competition strengthen consumer preferences for a supplier's product. They found that although suppliers face keen competition due to non-linear prices, these prices also give rise to incentives to promote and innovate and the bargaining power of the JPG had no effect.

The difference with the present study is that in the public sector, spending is locked by budgets and cannot be affected by the willingness of citizens. On the other hand, SCP can influence the fitness for purpose of the joint purchasing group. The study's quantitative findings indicated that increasing innovation has been recognised as the second highest value of SCP (SCPCCT6, 0.709, factor loading) and the most significant value of the dimensions of the SCP in fulfilling procurement functions, which is highly relevant to the value of the SCP. This is reinforced by SCPCCT1: (0.775, highest factor loading) "*LAs have quicker innovative products/services or infrastructural works through the SCP*". The SCPCCT1 dimension is concentrated on the lead-time of new products and services to citizens. This indicates that the processes of persistent innovation and product development are involved in collaborative arrangements of SCP in the Netherlands (Kamal, 2012).

The qualitative and quantitative phases of this research can be distinguished by the fact that the main findings of the qualitative interviewees were that product development/innovation is gained from external advisors or external organisations and that those gains are adopted less often by civil servants.

"External advisors or external organisations add product development/innovation".

Interviewees B, D & F

"Civil servants have applied less external product development/innovation expertise, which were working in our municipality".

Interviewee B

The findings of the quantitative study accepted product development/innovation as added value of collaboration through the SCP. The findings from the quantitative component of the research suggested that outsourcing procurement through an SCP brought more innovation to LAs; this was the second most important value with a factor loading of 0.709: SPCCCT6, *LAs have more access to innovation in their products/services/works by outsourcing the procurement function to SCP*. SPCCCT1, *LAs have quicker new and innovative products/services through SCP*, was ranked in first place for the value component with a factor loading of 0.775. The triangulation undertaken in this research is not inconsistent; nonetheless, the quantitative data

strengthens the observations from the interviewees. According to earlier research, the SCP can reinforce innovation in products and services, by motivating cooperation between LA policymakers and suppliers (Yan, Yang, & Dooley, 2017), where suppliers are selected with similar business objectives (Pulles et al., 2014) and distinctive capabilities and technologies (Pulles et al., 2014).

Additionally, the case study analysed the performance of joint-purchase groups versus individual procurement projects. One joint-purchase group was *'contracting flexible employees capacity'.* The higher procurement costs per LA in individual procurement projects was due to the longer cycle time required to develop a new, innovative way of integrating these service into the LAs' business organisations (Yan et al., 2017). The new contracted services required a new way of working for management, which gained efficiency and effectiveness. It also introduced high procurement risks due to the high volume of money and risk of degradation involved. The SCP had an integral initiating role in the business model and by developing and implementing of probabilities that the business model in interaction with the suppliers market and LAs, gain those innovation (Chang, 2017). In this case, the final output service has not been changed, *'contracting flexible employees capacity'*, the introduction of new business organisational structures, improving processes and reducing organisational issues that lead to enhance services which improves the core competence of the LA (Ljungquist, 2013). In this case, this study has shown that SCP contributes to innovation of this nature (Chapman, Soosay, & Kandampully, 2003).

The contribution of the SCP in the innovation processes compared with the procurement function of the individual LA has been found in this study to result in reduced lead-time and improved decision-making (Chapman et al., 2003): SCPCCT2 '*SCP leads to more flexibility and agility regarding procurement capacity'* with a factor loading of 0.610. The SCP's core business is to organise an excellent procurement function for their LAs. Hence, LAs demand and expect innovative procurement proposals from their regional SCP (Lu et al., 2014). This study has established that LAs enjoy more innovation in product/services, product services and processes (Chapman et al., 2003) through outsourcing their procurement function to the SCP (SCPCCT6 with a factor loading of 0.709).

The influence of the SCP related to this dimension is that the SCP has expertise regarding public procurement procedures and relevant law and the know-how of the supplier market and can assist start-ups or new companies with clear information about public procurement rules, managing technical competences for specifications, organising competences for cooperative demand, managerial control, allocation of resources for public procurers, organising commitment management and political support (Zelenbabic, 2015).
Furthermore, the SCP has the opportunity to use the regional platform to launch innovative improvements, unrestricted by any form of product of service specialisation. This is because procurement is integrated into all of the different value chains of the LAs (Edler et al., 2005).

These findings from the present study are consistent with those from previous research, which have acknowledged the contribution of procurement to the innovation processes. Murray et al. (2008) showed that small LAs benefit from SCP but not necessarily from SSCs. Proulx et al. (2014) suggest smaller, formal collaborative arrangements to start building trust between members. Paagmana et al. (2015) more recently identified that SSCs are not really involved in innovative questions and do not receive particularly high attention from their stakeholders. The distinction that must be made is that innovation can be in the form of new organisational structures, refining processes and reducing organisational matters that lead to value-added services (Chapman et al., 2003). In Proulx et al. (2014), SCPs are a collaborative organisational form of an innovative organisation model that has developed over time. The majority of these collaborative organisations push the boundaries and consequently the identities of LAs.

Membership in a collaborative activity results in the loss of at least some of a government's autonomy (Tsasis, 2009; Williams, 2013). In this study, LAs have found ways to retain and manage their boundaries concerning innovative projects to still outsource procurement to their SCP voluntarily. The LAs are facilitated and advised in the innovation progress and carefully balance the loss of autonomy and securing risks. In this study, the SCP participates in collaboration equally to avoid domination. Nevertheless, the SCP has to assure the common goal of the innovative JPG – to guarantee trust between LAs (Rolfstam, Phillips, & Bakker, 2011; Williams, 2013).

This study found that product development/innovation is recognised as a valuable item in public procurement functions for individual LAs. Their performance in this area can be improved through SCPs. This is consistent with the forgoing research and extends the opportunities for LA product development/innovation by adding the independent professional role of SCPs and guaranteeing boundaries for LAs. This discussion is summarised in Table 5-5.

Three variables made a positive contribution to the performance of SCP and the dimension "Agility & Flexibility":

- SPCCCT1, LAs have quicker new and innovative products/services through the SCP.
- SPCCCT6, LAs have greater access to innovation in their products/services/works by outsourcing procurement through SCP.
- SCPTC8, LAs have shorter cycle times during execution of procurement procedures by SCP.

Table 5-5 Product Development/Innovation - Support, Disagreements and Contributions

Author	Main Research topic	Support, disagreements, and contributions
Yan et al. (2017)	Innovation value does not only come from the resources the suppliers retain but also from resources that the supplier has access to through its value network.	Innovation ideas come mostly from members of the SCP.
Proulx et al. (2014)	They described several types of collaborative organisations for innovation in order to secure resources and to increase the potential to more effectively meet each collaborator's mission.	They identified several types of collaborative organisations, from those with a low degree of innovation and those with a high degree of innovation (finally merged). The most valuable practical research question concerns the effectiveness of these collaborations in achieving programme advances and efficiencies. Even when collaborations result in advances and efficiencies, they

Author	Main Research topic	Support, disagreements, and contributions
		may provide no more advantage than what is achieved separately, or what might have been achieved by one stronger organisation alone.
Pazirandeh and Herlin (2014)	Incidental procurement initiatives, from the cases studies, did not contribute to increased power. It was found that in addition to increased volumes, the effect of the strategy on other sources of power such as interconnections is also of importance.	Collaborative arrangements are hampered by innovation and product development output caused by the design of the collaborative processes.
Paagmana et al. (2015)	Innovation was a less significant feature of the political agenda at that time. Government spending on technology was significantly lower than in the private sector.	Benefits of collaborative models could be extended in future to include soft innovation.
Meehan et al. (2016)	National consolidated, single-sourced contracts restrict product development/innovation. This strong professional core of operational staff is valued internally within authorities but is an area of tension and competition between authorities.	The regional SCP approach has access to the local needs of the LAs and prevents huge standardised contracts.
Product development/ Innovation	**This study's definition**	**Innovation, technically and processually, is multiplied through the SCP. Value does not only come from the resources the suppliers retain but also from the resources that the SCP has access to through its LA structural network. Innovation in products and processes for LAs has been enforced.**

Complementary resources

The literature review identified complementary resources derived from the RBT, which enables additional assets to improve LAs' procurement function. The RBT explains several effects of collaborative procurement. In the interviews, the complementary resources for LAs through the SCP have been investigated, derived from the strategic and economic theories that form the basis of this study. In this study, among others, the relationship between the contributions of resources through the SCP and the procurement performance of the LAs has been explored. One of the theoretical contributions is that the RBT influences the procurement performance of the LA. Brewer et al. (2014) find that the RBT has more influence on procurement outsource spending than the TCT. This study underlines that conclusion from both the qualitative perspective and the quantitative.

"Gaining access to critical resources, motivation for joining SCP"

Interviewees A, B, C, D, E, F and G

"*Continuity [in] access to critical resources, motivation for joining SCP"*

Interviewees B, C, E, and F

For small and mid-sized LAs, it is difficult to implement and continue a professional procurement function (Murray et al., 2008; Sporrong & Kadefors, 2014). Proulx et al. (2014) argue that each group member provides complementary or similar resources in JPGs. If a group participant does not put in the required effort, then the other group members might see this as unfair. This could lead to conflicts and LAs could leave the group or adopt a much more passive attitude towards it. To be successful, the necessary efforts and activities need to be carried out.

Hamel and Prahalad (1990) made the case for RBT by encouraging organisations to focus on their core business and produce excellent services to citizens. This study found 64.1% of LAs to have completely or partially outsourced their procurement activities to SCPs. Which complementary resources for the LAs have been deducted of the RBT (Hamel & Prahalad, 1990) and studied if significantly recognised via the LAs. These complementary resources not only relate to capacity assets but also to technological, knowledgeable and human capital assets. The quantitative part of this study investigated

if a combination of complementary resources in the procurement function enabled greater procurement performance for LAs, suggesting that procurement performances can be improved by effectively applying procurement function resources that are valuable, infrequent, incorrectly imitable and not switchable (Barney, 1991; Brewer et al., 2014). In the interviews, the following items were mentioned.

"The SCP provides our organisation with more 'social return' aspects in the procurement function [and] more attention [to] green procurement items".

Interviewees A, C, E, and F

Besides this, they also mentioned in this area,

"SMEs have better entry to public procurement tenders, and public information sessions and conferences contributed to that".

Walker et al. (2013) suggested early support for SMEs through collaborative procurements. On the other hand, they also argue for more balance with SMEs, preferring SME buying, which could become a barricade to effective collaborative procurement. Nonetheless, there is a deeper balance in local SME preferences and globalisation through distinctive customising of strategies to source commodities. Loader (2015) identified that a lack of knowledge about procedures and opportunities, prohibitive contract volumes, intimidating contract lengths and uncertainty of work within framework contracts are barriers for SMEs and were causing increasing changes in the public sector. Her recommendation of micro lots to advance access for SMEs can be argued in the context of the TCT (Costantino et al., 2012; Coulson, 1997; Karjalainen, 2011; Williamson, 1985), and can be avoid via solidly applying commodity sourcing strategies. In addition to this, the importance of the 'entrance gate' function of the SCP can be considered a complementary resource regarding effective business (A. Flynn & Davis, 2016; Anthony Flynn, McKevitt, & Davis, 2015).

The quantitative side of this study has not directly looked at how SCPs can enlarge SMEs. However, in the context of TCT (Coase, 1937; Williamson, 1985), which was criticised by Loader (2015), tenders should be less inflexible regarding requirement, and tender specifications need to be more encouraging for SMEs. Similarly, procurement specifications need to be more standardised and savings in procurement costs can be realised by uniformity and standardisation of procurement processes and tender

documents (Albano & Sparro, 2010; Costantino et al., 2012). Regarding this, the variable/item SCPTC10 suggests a connection with the component 'Cost reduction' where $r = 0.499$ and $p < 0.05$. This verifies that LAs perceive, through uniformity and standardisation of specifications, cost reductions as increased performance. This confirms the earlier views of Murray et al. (2008) in their research on collaboration in local governments. A. Flynn and Davis (2016) argue for more standard procurement concerning e-tender procedures to encourage SMEs to engage in public procurement, to reduce transaction costs in bidding proceedings (Costantino et al., 2012), and to increase innovation in green procurement (Rainville, 2016).

From the point of view of complementary resources, variable/item SCPTC11, "*SCP leads to standardisation and uniformity of the procurement services",* shows that LAs' control and consistency regarding procurement services has been noticed as a complementary resource which gains value for LAs. The LAs linked this complementary resource as benefits, which firstly gain 'Access to knowledge and capacity' where $r = 0.611$ and $p < 0.05$, secondly 'Cost reductions' where $r = 0.449$ and $p < 0.05$, and thirdly 'Goal Alignment', where $r = 0.311$ and $p < 0.05$. Therefore, this complementary resource, "*SCP leads to standardisation and uniformity of the procurement services",* has significant causality with the dimension Access to Knowledge.

The variable item *'SCPCCT2 SCP leads to more flexibility and agility regarding procurement capacity'*, has a significant positive correlation with $r = 0.610$, $p < 0.05$, which identified a strong connection with the dimension 'value' for LAs. The regression analysis (regression b* 0.169, p< .046) of the dimension 'Agility & flexibility' shows a relatively strong relationship with the variable item *'SCPTC8 SCP reduction of cycle time of the execution of the procurement process'.* This is in line with Khoshlahn and Ardabili (2016), who stated that organisational agility has a positive effect on service in the public sector. Structural (regional) collaborative procurement organisations are capable of embedding flexibility and agility, to organise resources and capabilities to meet the 'turbulent' procurement demand of the LAs. LAs are conventional business organisational structures, without full-bodied procurement planning IT systems. They are driven by forecasts and budgets and procurement has been integrated into this systematic process; however, it is not equipped for situational factors and ad hoc

decisions or demands (Khoshlahn & Ardabili, 2016; Makkonen, Olkkonen, & Halinen, 2012).

Item SCPRBT7, '*Our LA share procurement equipment (network, IT, computers) with the members of the SCP',* where $r = 0.500$ and $p < 0.05$, shows a moderate correlation with the source of power Resource sharing & Business capabilities.

SCPRBT8, *'Our LA pool procurement and non-procurement resources (training, time, money, etc.)'*, is moderately correlated with the source of power Resource sharing & Business capabilities, where $r = 0.509$ and $p < 0.05$.

SCPRBT9, *'Civil servant of LAs are indirectly trained in business skills through the SCP',* is moderately correlated with Resource sharing & Business capabilities, where $r = 0.529$ and $p < 0.05$, which indicates positive causality.

In the qualitative phase of this study, in-depth, semi-structured interviews were conducted as a complementary resource, indirectly 'copying' the knowledge and business attitude of procurement experts through the civil servants of LAs.

"Disappointed in the way of sharing experiences of the way SCP experts execute procurement processes".

Interviewee B

Wei, Zheng, and Zhang (2011) explain this phenomenon to distance and structural similarities. Knowledge sharing is also affected by the robustness of the embedding of the procurement experts in LA teams and reinforced by the learning culture of the SCP and the LAs. Although not proven empirically, Nesheim and Smith (2015) stated that external experts share knowledge to a lesser degree than conventional staff. Wei et al. (2011) empirically show that the integration of experts into organisational teams reinforces cooperative behaviour such as interest in the exchange of knowledge, concepts, and processes. The findings in the qualitative and quantitative phases of this research confirm the positive causality of Resource sharing & Business capabilities in terms of the quantity of autonomous motivation, perceived organisational support and the level of trust. When procurement experts believe that an LA values his or her

contribution and is concerned about their welfare, they will respond with cooperative performance, such as involvement in the exchange of ideas, methods, and experiences (Nesheim & Smith, 2015). Furthermore, commitment to the politics of the LAs has a constructive impact on knowledge sharing performance, especially regarding integrating into collaborative arrangements in the public sector. As well as the commitment of the board, the commitment of the middle management and decentralisation of procurement experts from the SCP in the business organisation of the LAs reinforces the exchange of knowledge between the SCP and LAs (Pazirandeh & Herlin, 2014).

The literature also highlighted SCPs' access to e-procurement systems as resources on behalf of LAs. Variable item SCPRBT7 has been analysed as a latent variable where $r = 0.500$ and $p < 0.05$, which indicates positive causality with the power source component Resource sharing & Business capabilities. This finding has been quantified in the case study of this study. Borman and Janssen (2013) found that consolidation and standardisation of IT ERP (enterprise resource planning) systems reduced workforces, and that wholesale licenses lead to discounted contracts and savings in operating costs as critical success factors for the outcome of SSCs. Their findings were founded on interviews. The present case study analysed the positive and negative quantities of this statement. SCP in this case study uses three IT software packages to complete their operational and tactical business processes. The next section will set out a comparative analysis of the total IT costs of a procurement administrative tendering system. The total costs of IT software are defined as costs for software and hardware to manage the total IT sourcing tender process. In general, however, the total costs of IT software include items such as investment/leasing, training, updating, internal applications, hardware, implementation suppliers, project management, linking up with other systems, maintenance, and IT consultancy.

The analysis in Table 4-3 confirmed and expanded the findings of Borman and Janssen (2013). The costs for sourcing/tendering software for one LA are approximately nine times more expensive than for another LA in an SCP. The costs of supply/contract management are approximately 19 times more expensive for one LA than for an LA in an SCP. Similarly, the costs of management information system are approximately 17 times more expensive than a single LA than for an LA in an SCP.

Besides the financial consequences, improved communication capabilities led to the formation of a professional tender system in which there was a greater degree of visibility and transparency. It enabled problems and tasks to be addressed quickly and resources to be used more efficiently (Smith, Winchester, Clegg, & Pang, 2013; Williamson, 1975). Four CFOs mentioned structural IT procurement information systems as contributions to their LAs, especially for building up hard data and facts and figures to benchmark performance against other members of the SCP.

"Developing structural IT procurement information for LA to build up consistent key figures for benchmarking".

Interviewees A, B, F&G

From the perspective of resources, an individual LA depends on the power of the resources of the supplier of the procurement IT system software. This supplier inversely has the power of the individual LA (Pfeffer & Salancik, 1978). The individual LA position is consolidated in SCP where the proportion has been distorted. In relation to this study, complementary IT procurement systems have been geared towards business information power and improving their self-sufficiency policies and purchasing strategies (Pazirandeh & Norrman, 2014).

The findings suggest that LAs network positions, such as regional located and copy organisations, influence the knowledge transfer, while the influence is reduced by manner of integrated of knowledge between SCP and LAs. The similarity between LAs and regional connectivity influences knowledge transfer (Wei et al., 2011), supported by short distances between the LAs and more equivalence in their organisational contexts. One interpretation could be that these findings extend the contribution of structure and thus the services of the SCP and the supported commitment in the region. This discussion is summarised in Table 5-6.

Table 5-6 Complementary Resources - Support, Disagreements and Contributions

Author	Main Research topic	Support, disagreements, and contributions
Walker et al. (2013)	Supporting access to public procurement tenders for SMEs. If local SME preference leads to JPGs that cost more or are less efficient, this could present a barrier to effective JPG.	SCP organises information sessions to widen access to public tenders for SMEs. SCP advises LAs in sourcing strategies to optimise the use of power of SMEs.
Murray et al. (2008)	Shared services for PP enables standardisation in specifications and tender phases.	LAs identify standardisation of specifications through SCP as an enabler of cost reductions.
Murray et al. (2008)	Shared services for PP do not improve procurement services for the LAs.	LAs identify standardisation and unambiguity of procurement services through SCP as an enabler of cost reduction.
Nesheim and Smith (2015)	There is no difference between employment (external or internal) for knowledge sharing.	
Borman and Janssen (2013)	Reducing costs for ERP system for LAs via SSC.	Identified information regarding lower costs for sourcing/tender IT systems. Supply/contract management IT systems and IT management systems. Also justifies less dependence on IT supplier(s).
Complementary resources	**This study definition**	**Calls for more structural and regional professional organised JPGs (Schotanus et al., 2010) whereby complementary resources are provided or organised by the SCP to unburden participants. The RBT provides complementary resources in the procurement function, such as expert centres, specialists, professional staff etc., which enables better procurement performance.**

Quality of services

In the public sector, budget cuts are always being discussed and quality squeezed. Paagmana et al. (2015) showed that improving service quality was rated in second place as an aim for shared services in previous academic literature, although their discussion mixed quality improvements for shared service back office organisations and final

output products and services for society. This research has studied the quality of the procurement services provided by the SCP.

The interviewees indicated that LAs are critical to the final performance of SCPs. Although LAs are member of SCPs, the output must be at least what they have agreed. Consequently, the performance of the SCP can be considered from two perspectives: whether or not the endeavour matches what was agreed with the members, and the level of procurement performance of LAs endorsed by the SCP. The quality of service in this research comprises the resources of the SCP, which can be expended to realise the objectives of the procurement of the LAs. The SCP has researched these resources on quality of the procurement experts of the SCP, procurement management of the SCP, procurement procedures and policies and procurement information and knowledge activities.

The interviews reflected and extended the service quality debate in the literature with the interviewees generally defining SCP as an operational execution procurement organisation.

"SCP is not a network organisation but an operational execution procurement organisation".

Interviewees A, B, D, F & G

Differences in interests between member LAs, caused by local policies or coalition agreements, are not an obstacle in the business operations of an SCP. Schalk (2013) suggests that even though fundamental organisational interests in the collaboration, contain the chance for manoeuvre of singular organisations by activating of actors as domain similarity and size similarity and number of members.

LAs are facilitated and accelerated by the SCP in the execution of strategic, tactical, and operational procurement, but it is the LAs that make the individual business decisions. This is in contrast to a network organisation where policy issues between LAs have been harmonised, in that way that LAs expect more service and operational organisation from the SCP (Hudson, Hardy, Henwood, & Wistow, 1999). This strategic vision prevents dangerous initiatives such as the exertion of financial resources to expand

activities that are not the core business of the SCP or the gaining of other private benefits. This can lead to agency costs and risks of opportunism if management pursue other objectives (Eisenhardt, 1989; Hudson et al., 1999) than the owners of the network organisation. Schalk (2013) found in his research that individual organisations are limited in restraining the manoeuvre room for individual organisations. For collaborative organisations, it is possible for network members to influence the perceptions of other players in such a way as to arrive at common policy strategies and solutions, as well if these suit the individual participant organisation or not. This has been averted by the narrowed scope of the primary business activities of SCP, the facilitate function/role and the associated financial funding (Bizob, 2017). Meanwhile, the output of the facilities of the SCP is sharply expected and controlled by their members.

Most of the interviewees considered 'improving the quality of procurement service' to be a key motivation, which aligns well with new policy directions in public management. Other important motives include internal quality considerations such as 'exchange of internal capabilities', and 'access to external resources'. These new policy directions in public management can be found in transparency and accountability drawback to spending public expenses. Therefore, the quality of SCP experts goes further than traditional procurement knowledge alone. Most of the interviewees agreed that SCP services offer legal, benchmark indicators, specialism in the procurement of special classes of services, infrastructure works, materials, and subsidies. From the point of view of core competence theory, these additional demands are explainable, whereas small LAs hold small business organisations in esteem. Also, in recent years this has moved from more of a support function to a primary activity. New policy directions such as sustainability, environmental awareness, fostering SMEs, and new public services such as health, safety, and home care, have expanded the boundaries of the business organisation of LAs to a maximum, effectively increasing the scope of the SCP. Williams (2013) suggests appropriate training and development programmes for civil servants in this case. Williams (2013) importantly states that collaboration is not a panacea for all issues in public services, as has been identified in this study's interviews, case study and quantitative questionnaire. This research has identified demand for a high-level supply of procurement, focused herein on public procurement.

Qualitative public policy themes such as sustainability, green procurement, social aspects, and access for SME firms were shown to be of significant importance in the LA questionnaires.

Service quality has been measured in the quantitative phase of this study by the variable/items SCPTC11 and SCPTC12:

- SCPTC11 SCP leads to standardisation and uniformity of procurement services;
- SCPTC12 SCP leads to standardisation and uniformity in the procurement demands of LAs.

SCPTC11 has a positive correlation with the component "Resource sharing & Business capabilities", where $r = 0.611$ and $p < 0.05$. This indicates medium to strong causality of standardisation and uniformity of the procurement services and processes. Possible interpretations include that quality of services has been recognised within the strategic objectives of the LAs, such as sustainability, environment, and EU legislation. This discussion is summarised in Table 5-7.

Table 5-7 Quality of Services - Support, Disagreements and Contributions

Author	Main research topic	Support, disagreements, and contributions
Paagmana et al. (2015) Walker et al. (2013)	Showed that improving service quality was high rated as an aim for shared services, although their discussion mixed quality improvements for shared service back office organisations.	This study supports the importancy of service quality of earlier research.
Schalk (2013)	Found in his research that individual organisations are limited in restraining the manoeuvre room for individual organisations, which can limited the quality of provided services.	This study shows, that SCP has narrowed their services to exclusive public procurement.
Murray et al. (2008); Williams (2013)	Importantly states that collaboration is not a panacea for all issues in public services.	This study shows that an effective scope of the SCP, meet the demands of the LAs.
Quality of services	**This study definition**	**This research has identified demand for a high-level quality of services, supply of procurement, focused herein on strategic public procurement and the new policies.**

Information asymmetry

In addition, an important role has been provided for the SCP in obtaining the relevant information for procurement. However, previous literature has mainly focussed on awareness of the demands of individual members.

Faes et al. (2000) identified economies of information as one synergy of global sourcing, based on the definition of global sourcing of Birou and Fawcett (1993). This definition can also be moved to collaboration, whereby 'worldwide business units' have been shifted to homogenous LAs; it can then be questioned whether SCP leads to economies of information. Meehan et al. (2016) noticed the lack of involvement of procurement experts in knowledge sharing diagonally across technical settings, which leads to an absence of business gains in the procurement processes in their research. Williams (2013) points out that it is essential for influencing the results of collaborative arrangements and that control of information is crucial. In the situation of collaboration, the use of rational and independent power is restricted, probably because of the status of the autonomous LAs, who are responsible for their own individual business organisations. On the other hand, LAs are members of SCP with one of their objectives being to diminish their external risk with contractors. Therefore, distinction between control of SCP and the bundle of information in the procurement pre-phase and procurement process, are actors that influence the result of the SCP for the LAs.

This part of the present study has researched whether LAs receive better information regarding procurement with or without the assistance of SCP. Information asymmetry is the basic cause of agency costs (Eisenhardt, 1989). The classical transaction theory suggests that LAs will use the least costly and most inefficient forms of organisation in their procurement processes(Coase, 1937; Williamson, 1975).

First, in the LA business, communication with entrepreneurs mainly concentrates on the procurement processes, which are obliged in procurement law, such as "open procedure". This can ensure the transparency of LA procurement function' pursuit with the interests of the present procurement project, whereas decentralising execution of tendering in one LA can lead to no company-clear of publication of information of the tender, so as to reinforce the agency tension caused by fragmentation.

Information asymmetries are studied in this research in the context of principal-agent problems where they are a major cause of misinformation and are essential in every communication process between LA and SCP and other linked collaborative arrangements. Several linked collaborative arrangements of LAs are described in the pilot study in Appendix VIII, which cause information asymmetries between the fragmented collaborative organisations, SSC and SCP by executing overlapping tasks or functions. Information asymmetry is in contrast to perfect information, which is a key assumption in neo-classical economics (Eisenhardt, 1985; McCue & Prier, 2007). Possible interpretations include that coordination between regional collaborative arrangements, like security, health-care, taxes, innovation, contribute to the efficiency and effectiveness of the transcending regional public organisations. This discussion is summarised in Table 5-8.

Table 5-8 Information Asymmetry - Support, Disagreements and Contributions

Author	Main research topic	Support, disagreements, and contributions
Faes et al. (2000)	Exploring the bridge and the gap between the literature stressing the need for achieving purchasing synergies on the one hand and specific implementation guidelines for managers on the other.	Internal collaboration improvement leads to insight in the market and learning, advanced exchange of information, and increases in market power rather than tangible cost savings.
Meehan et al. (2016)	Information is shared through technical collaborative meetings but procurement is not involved in many of the technical forums and the technical staff is not involved in regional procurement meetings, limiting opportunities for collaborative procurement options in the exploration phases. This reduces the commercial challenge in procurement processes.	Supports the structural approach of collaborative arrangements. Overlapping and shortages of information can also be a risk for inefficiency and ineffectiveness and not using the present professions.
Williams (2013)	This research focuses on the role of agency within collaboration, its identification of different types of opposition and resistance, and its critical analysis of the competencies and challenges they face in contemporary public management.	It is necessary to influence outcomes through informal aspects because the collaboration arrangement has not a merged autonomous status.

Author	Main research topic	Support, disagreements, and contributions
Information asymmetry	**This study definition**	**The demand and value of the central coordination of activities by LAs in a region. Also the allocation of the information around the collaborative organisation in the region.**

Cost-competitiveness

This study assumes structural collaboration between LAs, as proposed by Murray et al. (2008). The view assumes that sources of cost-competitiveness might be an enabler for LAs, just as collaboration and professional procurement strengths are considered to deliver competitive savings within LAs in a competitive market.

However, Meehan et al. (2016) outlined the movement of goals in the public sector for competitive bidding over the years, from cutting unit prices (Erridge, 2007) to integrity (Schooner, 2013; Schooner, 2002). Scholarly attention has been increasingly focused on value in recent years (House-of-Commons-Communities-and-Local-Government-Committee, 2014). National government programmes for the environment, social care and unemployed people have led to lobbying of branch organisations and also challenged the market to come up with innovative solutions (Rainville, 2016; Rolfstam et al., 2011).

The interviews showed integrity to be a fundamental pillar of demand in LAs for professional procurement – an additional control mechanism in the decision-making process.

"The four-eyes principle in the procurement function has been in place for our LA since the start, [and is] an important motivation"

(Interviewees A, G)

Despite the clear mandate to deliver value for money, the need for public bodies to comply with the European Union and National Public Procurement Directives can result in propriety and transparency requirements taking precedence over more commercial goals (Erridge, 2007). This can be reinforced by the need for LAs to show accountability in their procurement functions and to operate in accordance with

European and national procurement laws and regulations.

Based on this study's interviews, in the case of cost-competitiveness, the concept of value for money ensures that (low) cost considerations do not override the accountability and integrity of the products and services procured. On the other hand, small LAs use the cost-competitiveness argument to avoid merger/amalgamation discussions with province directors (Petersen & Houlberg, 2017; Van Houwelingen, 2017). In the Netherlands, at the national government level, there is currently pressure to create LAs and municipalities with a minimum of 100,000 inhabitants (Nehmelman, 2015). The arguments for this are more political rather than based on organisational efficiency and cost efficiency (Van Houwelingen, 2017). In this study in particular, the interviewees from LAs with fewer inhabitants than 20,000 showed that their councils were collaborating with other organisations to avoid this pressure.

"SCP is necessary for small organisations to survive, to have maximum procurement resources and the lowest costs."

Interviewees A, C, F

Complementary to the early research of Allers and Van Ommeren (2016), this study suggests cost-competitiveness as an enabler of SCP. Table 4-1 shows the financial benefits for LAs from JPGs. Procurement does not require merging or reclassification (Allers & Van Ommeren, 2016; Van de Laar, 2010). The procurement costs of joint purchasing groups are independent of the size of the LA involved. The SCP in the case study calculates and divides its costs over its members (Bizob, 2017) in accordance with the Treaty on the European Union, Article 19, "Het leerstuk kosten voor gemene rekening". Alternatively, it could be an effect of avoiding merger discussion, to search for alternate cost-reduction possibilities. This discussion is summarised in Table 5-9.

Table 5-9 Cost-competitiveness - Support, Disagreements and Contributions

Author	Main research topic	Support, disagreements, and contributions
Murray et al. (2008)	This research provides evidence of some smaller LAs benefiting from collaborating in inter organisational procurement shared services.	Cost-competitiveness suggested as an enabler of SCP. The research highlights the need to adopt an incremental approach and also sets out suggestions for a strategic approach to a shared services procurement strategy. They call for research into new emerging procurement structural model.
Meehan et al. (2016)	The findings represent select mechanisms in public procurement by exploring tensions arising from collaborative procurement strategies within and between organisations.	Cost-competitiveness has been pushed by the central government. LAs could struggle to legislate strategies of resistance, particularly as the government reports that reduced strain and potential cost savings could be gained through collaboration. This supports the motivation of this study for SCP.
Cost-competitiveness	**This study definition**	**This study suggests cost-competitiveness as an enabler of SCP.**

5.2.2 How can structural collaboration influence *value* in internal business processes in the Netherlands (RO1)?

RQ1b – how can SCP influence value in internal business processes in the Netherlands –requires an *explanation* of the phenomena of collaboration in the public procurement process.

The ground analysis in the case study and the interviews suggests that the data was reviewed against theories to locate the underpinning values, beliefs and behaviours related to the espoused barriers. In places this was supported by quantitative stance from the questionnaire.

Section 2.5.4 explained the scope and content of the conception of value viewed from LAs' perceptions. This section will narrow down the reasons why SCP is an alternative for LAs to improve the value items produced by their business processes.

It is essential for the (continued) existence of an SCP that LAs obviously recognise why they should collaborate. Based on the agency cost theory, Chapter 2, paragraph 4.4.2. presented explanations for the extent of opportunities and effective challenging of problems of value items in the business procurement processes from a theoretical examination. The nature of the interrelationships between LAs regarding collaboration. In other words, according to the findings, LAs do not conclude the fulfilment of their mutual relation to the nature of their mutual relationship. This is unlike what is expected from the theory; a similarity between theoretical stance and execution would be the most efficient relationship.

Hudson et al. (1999) addresses five issues at play in 'agency relations' to explain collaborative involvement in the effective output of valuable items. The first problem arises when the LA (principal) and SCP (agent) interests are not the same. The second problem arises through bounded rationality; the third is asymmetry of information; and the fourth is transparency of information. The fifth issue is goal synchronisation.

In certain situations, it is difficult for the LA to find out what the SCP actually does. Difficulty arises when the LA cannot find out if the SCP has operated appropriately (Eisenhardt, 1989). Another issue relates to the distribution of risk ("problem of risk") as LAs and SCPs may prefer different ways of operating regarding risk (Eisenhardt, 1989). Hence, this theory has been applied in this study to explore and explain the function of collaboration in the business procurement processes of LAs.

Self-interest

In this examination of the procurement productivity of organisations in collaborative environments, the role of control is to provide measures and rewards such that individuals pursuing their own self-interest will also pursue collective interests. Consistent with the principles of theories, the view adopted here assumes that SCPs are rational, self-interested utility maximisers. However, it is not assumed that SCPs behave inconsiderately or with guile. In contrast to Williamson (1985) transaction cost economics framework, although it is assumed that people are opportunistic in the sense that they will, in a self-interested manner, try to fulfils their needs with minimal effort, it is not assumed that they will willingly misrepresent. Hudson et al. (1999) suggest that collaboration be recognised as a largely self-interested activity, which therefore requires

identification of the benefits for all participants. Hudson et al. (1999) argued in their research that collaboration takes place because it is in the self-interest of the organisations and their people involved to do so. Levine and White (1961) noted that exchange between organisations will be reinforced if interaction is voluntary.

In this research, all the of interviewees defined the SCP as a consulting and execution organisation,

"For the LAs and from the LAs".

(Interviewees A, B, C, D, F & G)

The interviewees mentioned the SCP as their own procurement organisation, whereby there is no financial profit for external or commercial organisations. The council commits the financial forecast and financial annual account (Bizob, 2017). Also, external supplies are formally contracted on the name of the LAs. Likewise, the financial stream to suppliers is directly from the LAs. The financial earnings model of the SCP is budget-neutral.

Bounded rationality

Where it can be shown that organisations can achieve the same ends more efficiently by working together rather than separately, there is a general consensus that they will collaborate, although managers and policymakers do not always have access to all of the conditions necessary for such purely rational decision-making. In addition, external factors may also affect the rationality of decisions, such as limited time and information or a hierarchy within an organisation. In contrast with Challis et al. (1988), who suggested that the rhetoric of rationality is permanent because it reflects and embodies the ideology of public bureaucracies, the interviewees in this study confirmed the general tendency of 'bounded' rationality. Three of the interviewees requested evidence of savings gained from collaboration – an assessment of equal procurement projects carried out by an organisation singly and in a collective.

"I'm convinced that SCP reduces procurement costs for my organisation, but I have to assume this……"

The case study showed that for several procured commodities, the procurement tender costs in joint purchasing groups executed through SCP are significantly lower than costs for individual organisations. Also, the quantitative research showed a strong correlation between the dimension of cost reduction and several variables, with savings descriptions caused by SCP.

Symmetrical information

McCue and Prier (2007) indicated that it is merely assumed that the principal and agent do not share the same levels of information, and as such, the agent can opportunistically take advantage of situations, sometimes to the disadvantage of the principal or vice versa. More to the point, it is merely assumed that as a result of agency theory, LAs and SCP do not share the same levels of information. Therefore the SCP can opportunistically take advantage of the situation, sometimes to the disadvantage of LAs. This is often the result of asymmetric information, a lack of strategic vision and to little structure in local collaborative initiatives and sub coordinated bodies (Hudson et al., 1999).

There is a strong relationship between information symmetry and the effectiveness and efficiency of SCPs, LAs and other regional collaborative organisations. Research indicates a number of key issues. Firstly, the fragmented and overlapping procurement activities in the same region. As shown in Table 4-9 and Appendix VIII, the descriptive statistics of variables show that SCP procurement is fragmented between different collaborative organisations for the same LAs. In the semi-structured, in-depth interviews, it was mentioned that management has recognised this issue. Subsequently, an action task group of business and finance controllers has been initiated and ordered by the councils of those LAs represented to investigate several collaborative activities and to stream and harmonise these activities.

The study findings indicate sharing information on a tactical level – activities, progress, and bottlenecks of procurement projects – and on a strategic level regarding annual procurement plans and goals. The quantitative phase mentioned in the dimension, component Coordination Mechanism, analysed on factor loadings. Variables SCPAT1 and SCPAT2 were mentioned as latent variables for this dimension. These two variables

represent the relative importance of the variable to the factor/dimension Coordination Mechanism (Pallant, 2010). SCPAT1 represents the importance of harmonisation of procurement policies. The procurement policy concerns strategic procurement objectives like sustainability, green procurement, cost reduction and local sourcing. Harmonisation and agreement on these procurement objectives amongst LAs in the same SCP have been seen as an important key performance enabler for the factor/dimension Coordination Mechanism.

The case study analysed nine joint purchase group projects, viewed in Table 4-1; one such project was simultaneously executed (commodity electric), viewed in Table 4-2. Here there were strong demands for green procurement, social return, relations with current regional suppliers and extent of outsourcing/insourcing/scope of the commission. The dissimilarities between LAs on green procurement and social return policies are caused by differences in the council procurement policies of the LAs in the SCP region. This constraining factor has resulted in several LAs realising the need for and requiring regulation/policy harmonisation (Pazirandeh & Herlin, 2014).

The interviews also made reference to the sluggish execution of JPG projects. The analysis identified operational-level barriers between users of LAs and the collaborative pressures of the SCP.

"In any joint purchase groups, I perceived a sluggish process, with a lot of meetings and communications emails, which resulted in a long cycle time of joint purchase group projects. In some cases, LAs dropped out because of the unbelievably slow process".

Interview I, CEO LA

Variable SCPAT2 has been loaded strongly as the latent variable in the factor analysis. This variable represents the statement that LAs in the SCP agree about operational execution. LAs have guidelines for the execution of each step in joint purchase project with detailed (sub) activities, time planning, cycle time and responsibilities. The target of this guideline is to encourage effectiveness and efficiency in JPG projects.

Transparency of information

Transparency of information adds to the performance of collaborative processes and the exchange of transparent information between managers to contribute to goal objectives

(Schalk, 2013). The argument here is that since information systems inform the principal about what the agent is actually doing, they are likely to limit agent opportunism because the SCP will understand that he or she cannot misinform the LAs (Eisenhardt, 1989). Based on Nocon (1994), Hudson et al. (1999) set out several stages of collaboration from networking, via federation, to the unitary model. These last steps can be followed by amalgamation. Information is shared at the second stage for procurement plans.

Appendix VIII shows several collaborative agencies where LAs in the case study are connected. Eight of those public organisations execute public services for the whole region of Southeast Brabant. The other six execute services at the sub-regional level, for example, the development of local industry and SSC services. The SCP is a regional organisation, executing procurement services for the whole region, including the sub-regions. Transparency and symmetry of procurement information between LAs is necessary for the exchange of demands, experience and benchmarking, which can add to service plans, a joint strategic plan, joint procurement planning, and joint execution (Hudson et al., 1999). Transparency of information also enhances better cost predictability, according to Janssen and Joha (2006), through benchmarking in contract management systems, which can be shared and used by all LAs.
Examination of the semi-structured, in-depth interviews conducted in this research indicated that role of joint planning was ranked high by the interviewees.

"The availability of the annual procurement plans of the LAs would reinforce the transparency of information between the procurement units of the LAs, with the goal of a further structural approach towards joint purchase groups and exchange of experiences."

Interviewees A, D and F

The low importance of the dimension SCPAT10 in the quantitative research of this study is remarkable. SCPAT10, *LAs of the regional SCP have joint procurement planning systems strategically, tactically and operationally,* is low factored in the factor analysis. The contradictory statistic demonstrated that joint procurement planning systems have low importance for the dimension Coordination Mechanism. The majority and the importance of procurement operational planning in the public sector depends on

the majority of the business organisations of the firm (Deasy et al., 2014). The SCP studied in the case study and in the interviews was founded in 2003. The SCPs studied in the quantitative study were founded after that period. The degree and scope of collaboration in the region of Southeast Netherlands in many activities are shown in Table 1-8 and Table 1-9. Also the regular meetings of aldermen, mayors and policy staff regarding issues such as safety in the region, development and innovation, regional industries, dust management, social return, social care, and collaborative procurement, require greater structural coordination (Hudson et al., 1999) to enhance transparency of information. This affects the effectiveness and efficiency of collaboration and prevents fragmentation and sub-optimisation.

Finally we come to the unitary model. This model pools resources to serve a single set of objectives. However, this must be limited to partial pooling otherwise the best description of the end result would be a merger (Allal-Chérif & Maira, 2011).

Goal conflict

This study has recognised the influence of goal synchronisation on the effectiveness and efficiency of collaboration between organisations. Existing evidence showed that a lack of goal consensus at the network level (Hudson et al., 1999) leads to a negative effect on network performance (Percival, 2009; Provan & Kenis, 2007). Primarily, the complexity of the modest concept of 'goals' will be discussed. There are usually several goals, some of which are explicitly pronounced, while others remain unspoken or a matter of course. The nature of goals can vary widely or be hybrid. It therefore seems difficult to identify clear goals of cooperation practices. This was mentioned in the interviews:

"Too few discussions about the content, possibilities and consequences of goals and their translation into specifications".

Interviews B, D, E and G

"Disinterest in each other's goals".

Interviews A and B

“Inefficiency is perceived as many meetings with no output”.

Interviews A and B

McCue and Prier (2007) analysed specific relationships, definitions, and concepts to build three models of cooperative public purchasing within the context of agency theory. They showed that goal synchronisation can be organised by using several roles and modelling the collaboration arrangement. One of the main difficulties that they found was the number of split loyalties among principals, whose goals are often in conflict. In contrast with the present research, this can be explained by the diversity of governance of the participants at local, regional and national level (Meehan et al., 2016).

The SCP model in this research is exclusive for and from the LAs and most of those have regional delimitations. However, the diversification between regional LAs can be significant, although on a regional level there is more harmonising of the policy of value items, recognised in the qualitative phase of this study.

"The regional group of mayors forced the aldermen and town managers to conduct one main policy for social return and an action plan for applying sustainability in procurement plans".

Interviews A, B, C, and G

Nevertheless, the degree and combination of value items varies in most of the JPGs for each individual LA. The present study implies that even though fundamental political interests limit individual LAs’ room to manoeuvre, it is possible for network members to influence the perceptions of other actors in such a way as to arrive at common policy strategies and solutions. This emphasises the importance of structural guidelines for JPGs and harmonising strategic procurement objectives of different LAs to foster efficient and effective collaboration.

The quantitative phase mentioned in the dimension Coordination Mechanism with the highest factor loadings, > 0.7, were SCPAT1 and SCPAT2, which concerned *agreement on goals and strategy*, and *agreement on the execution of collaborative procurement*

projects. These systems are necessary to define the goals and objectives of procurement projects.

The situation discussed above can be explained through transaction cost economics. Transaction costs are presumably lower when LAs are similar in their policies, goals and demands as there may be less uncertainty and less need for fine-tuning and communication.

5.2.3 How can these *values* be affected by structural collaboration in the Netherlands (RO1)?

RO1c requires a *change* between the value items, which can be realised through public procurement for internal business processes, and multiple acceleration through collaboration.

Symptoms of diseconomies of scale were marginally mentioned in the interviews. One interviewee mentioned:

"In any joint purchase groups, I perceived a sluggish process, with a lot of meetings and communications mails".

Interviews A and G

The utility of value items, which can be affected by SCP, can also be affected by the SCP's organisation and boundaries. Nollet and Beaulieu (2005) asserted that regional purchasing groups are closer to users to facilitate closer user commitment and involvement. Civil servants, aldermen, mayors, and LA managers are more familiar with their SCP. The span of control of SCPs was mentioned several times in the interviews.

"The SCP must be manageable, controllable and recognisable".

Interviews A, B and G

5.2.4 What causes *uncertainty* in the internal business processes of public procurement function (RO2)?

RO2a requires *exploration and description* of uncertain items in the internal processes of public procurement, which can be affected by structural collaboration. The current

trend of activities being decentralised from the national government has ensured, among other things, that the working area of a public service has exceeded municipalities' boundaries (Allers & Van Ommeren, 2016). This regionalisation movement has shown the limitations of traditional models of managing procurement functions in LAs by revealing the interdependence of LAs operating in the same market and the risks resulting from vulnerable procurement functions in a more complex procurement environment.

In the existing quantitative research, it has been broadly recognised that LAs are less dependent on their procurement function, which contributes to the continuity of the business processes and operations (Malatesta & Smith, 2014). Other reasons to cooperate are that some municipalities are simply too small to perform every task independently (Van Houwelingen, 2017). Analyses of the interviews conducted in this study also noted less dependence on the scarce supply of employees in the procurement market. Lower dependence on coaching, training and guidance in procurement functions as well as standardisation and availability of tools were also mentioned (Murray et al., 2008).

"My LA has sustainable access to procurement knowledge and is less dependent on externals".

Interview A, B, C, D, E, F and G

"Our organisation has direct and quick access to legal procurement knowledge and is thereby less dependent on external legal offices".

Interview D, E, and F

"We have tried several times to organise an in-house professional procurement unit and collaborative network structure but [there has been] no continuity and [we are] still dependent on external offices"

Interview B and C

In the quantitative phase, variable SCPRDT1, *"LAs get access to critical procurement knowledge, and resources"*, showed a high factor loading ranking in the dimension Resource sharing & Business capabilities.

Organisational success in the RBT is defined as LAs minimising their scarcity on procurement resources. RBT also usually helps LAs to formulate business-level strategies and link these to their social challenges (Van Houwelingen, 2017). Although the RBT is limited in explaining of behaviour, structure, stability, and change in organisations.

What can be concluded is that the nature of LAs' strategies and strategic participation in SCPs are being made according to using internal resources as they continue their business processes and strategies are being made to get effectiveness with respect to external resources (Nemati, Bhatti, Maqsal, Mansoor, & Naveed, 2010). Besides SCP has been noticed as external resources, can it also be noticed as internal resources, because most of the activities are executed at the outlet of LAs and SCPs are owned by LAs in terms of their financing and governance.

Information asymmetry

The source of power "information asymmetry" contributes in this study by the RBT. From the view of RBT, it is the availability of procurement management information. Procurement information is applicable for the SCP and not for the individual LA (Nemati et al., 2010). In the qualitative phase, LAs' demand for procurement information is mentioned. This is obtainable from SCP but only on request and with permission from the SCP. On the one hand, this is a unique selling point of the SCP but on the other hand constitutes information asymmetry, which generates independence (Pfeffer & Salancik, 1978).

"Gathering of buying information and procurement plans is an activity of the SCP".

Interview A, B, C, D, E, F and G

The IT function in the publication of tender in business processes has been noted as asymmetry information for the LA, that creates a dependency from the LA to SCP. On the other hand, LAs recognise the unique contribution of SCP to their business processes. This concerns unlocking data, developing procurement publication templates, and publishing public tenders on national and European IT websites.

"Our LA remains dependent on the SCP for the procurement IT system resources".

Interview F and G

In the quantitative analyses, the dimension SCPRDT6 *"Procurement processes are more transparent for my LA through the SCP"*, has a factor loading of 0.70 in the factor analysis. This indicates that transparency in the procurement processes is a source of information about component/dimension uncertainty to keep up the contribution of the SCP for the LAs.

In addition, the dimension SCPRDT4 *"My LA has more control and grip on the information and communication in the procurement processes via the SCP"*, has a positive factor loading. This means that the transparency and control of procurement processes via the SCP is an underlying variable to the dimension of uncertainty, which contributes to less uncertainty in the procurement process for LAs.

Demand share

Coalitions are formed due to their combined purchasing power (Schotanus et al., 2009). In addition, there should also be a driving factor such as high monopolistic supplier power driving up prices to motivate the formation of such a confederacy. The SCPs in the Netherlands were formed to capitalise on powerful purchasing through bundling volumes, to offset high transaction costs, and to leverage organisations' combined demand share regarding procurement (Richter & Brühl, 2017).

The triangulation in this research supports the double-sided conviction that the purchase power source 'demand share' supports purchase power in oligopolistic and monopolistic supplier markets. In the dimension 'uncertainty', the factor loading of SCPRDT8, *"LAs have more dominance in the supplier market by buying together"*, scores a very high loading factor, which indicates significant exploration of the RBT. The dominant positions of the joint LAs have been identified as a collaborative source of power (Karjalainen, 2011; Kastanioti et al., 2013) whereby the uncertainty in and dependence on oligopolistic and monopolist supplier markets have been diminished. Strengthened by the factor loading of variable SCPRDT2 *"My LA has more influence on the conditions of monopolistic suppliers by the input of the SCP"*, the power source demand share has been recognised as limiting uncertainty in the procurement processes.

Dimension uncertainty and power of source demand share, have been studied in this research similarly from another perspective, namely sharing capacity and knowledge, to

be less dependent on external organisations (Malatesta & Smith, 2014). The variable SCPRDT7 *"My LA has more access to professional procurement experts, by exchanging capacity and knowledge in the SCP, causing less dependence on external organisations"* has scored high in the factor loading analysis for the dimension Resource sharing & Business capabilities. This understanding suggests an important contribution to reducing resource and knowledge uncertainty for each individual LA.

Reputation/Legitimacy

The reputation of the SCP with its participant LAs also impacts its dependence and authority. One example of an authority indicator related to reputations is legitimacy, comprehended as the endorsement and recognition of the outcome of the SCP activities by its participants – the LAs (Pfeffer & Salancik, 1978).

The high ranking of the factor loading of the variable SCPRDT10 "*My LA goes along with the publicity of the SCP"* indicated that the reputation and legitimacy of the SCP reduce the uncertainty in the procurement processes for each individual LA. An ambitious presentation to the supplier market required more professional appearances to entrepreneurs, branch organisations and other relational LAs (Herlin & Pazirandeh, 2012). Pazirandeh and Norrman (2014) found evidence that purchasing strategies have an impact on reputation as a source of power.

In previous research, interviews have explained that procurement organisations' reputations are built up over a number of years on two sources of power: procurement strategies, and strategies concerning the governance of collaborative organisations. Responses to each power source are discussed below. Cost leadership arguments and accountability are the heart of the matter, in the opinion of the interviewees. Researchers have also mentioned contributions to lower procurement costs achieved by consolidation of purchases in and with LAs; competitive tendering; and single or multi-sourcing strategies depending on the procurement project, goals and market situation (Gelderman & Van Weele, 2003). Corporate liability regarding (EU) procurement procedures were also argued to show a solid internal organisation to citizens and councils. Previous literature has also mentioned strategies such as increasing SMEs' and local suppliers' access to public tenders (A. Flynn & Davis, 2016). Besides output

arguments, continuity and structural governance of SCPs have also been discussed (Richter & Brühl, 2017).

"Never rarely our LA receives negative information about the SCP"

Interview A, B, F and G

"The lateral information on political level is positive for the brand of the SCP".

Interview A, B, C, D, E, F, G and H

"Seminars organised for entrepreneurs by the SCP boost their reputation at the political level of the LA".

Interview B, D, F, G, and H

"SCP is mainly known for downsizing procurement costs".

Interview A, B, F, G and H

This is reinforced by SCPRDT9, *"SCP has legitimacy effect for my LA of excellent commissioning"*. This variable has a strong factor loading for the dimension/component of uncertainty, which indicates a robust fundamental position of the existence and continuation of the SCP to its stakeholders with as management, councils, and citizens and entrepreneurs representing excellent public procurement authority. A positive reputation adds legitimacy to being a member of SCP to align with internal stakeholders. Continuity of knowledge and resources is hereby secured and thus the procurement function is more granted in the business processes of the LA (Nollet & Beaulieu, 2005; Paagmana et al., 2015).

5.2.5 What causes *cost reduction* in the internal business processes of public procurement functions (RO3)?

RO3a requires *exploration and description* of cost reduction items in public procurement for internal processes, which can be affected by structural collaboration.

Internal business processes in the public procurement functions of LAs in the previous study mainly emphasised the pre-stage and sourcing stages and in JPGs supplemented

with evaluation part of contract management. Collaborative procurement in previous research goes beyond JPGs (Nollet & Beaulieu, 2005; Schotanus et al., 2010).

In phase 2 in Chapter 4, the causes of cost reductions in the internal business processes of public procurement functions are analysed using quantitative analysis. Variable SCPTC12 "*LA has more standardisation in the procurement processes, which leads to financial savings"* has a significantly high factor loading in the dimension/component cost reduction. This indicates that "*standardisation in the procurement processes"* has been recognised as an important contribution to cost reduction by SCP. Standardisation in the procurement processes also refers to the pre-stage, sourcing and contract management stages. Pazirandeh and Herlin (2014) roughly reinforced these findings and suggested in their study that greater formalisation of procurement processes and procedures would ensure the commitment of participants. The current findings argue for more standardisation and formalisation during the procurement process to secure cost savings.

Zooming in on "*standardisation in the procurement processes"* of LAs and translating this into business processes, there are learning processes before it will arrive at its optimum ability. This learning concept impacts productivity costs and savings in all phases of the procurement process. There is a mathematical relationship between the cumulative days per procurement procedure and the number of executed procurement procedures. In the case study, data has been collected regarding the spent procurement capacity measured in the resource IT system. It has been assumed that days spent executing a procurement procedure is not a proportional variable.

The mathematical relationship has the exponential form:

$$PC_n = PC_1 * (n^b) \quad (1)$$

PC_n = Procurement capacity spend per day when *n* procurement procedures are executed. (2)

PC_1 = days spent executing the first procurement procedure. (3)

n = the unit procurement procedure executed. (4)

b = a constant representing the slope of the curve. (5)

Table 5-10 Algorithm of Number Procurement Procedures and Days Spend

Procurement procedure(s)	1	2	4	8	16	32	64	128	256	512	1024	2028	4056
Days spent	10	9.5	9.03	8.58	8.15	7.74	7.35	6.99	6.64	6.31	5.99	6.29	6.60

In an exponential 95% learning curve, a 5% learning rate can be assumed based on data from the Bizob information system. Figure 5-4 displays this relationship graphically. The curve declines slowly at first, and then evens out, declining very rapidly as additional procurement procedures are executed. When the number of procurement procedures n > 1029, the optimum point of the learning curve has been reached and a slight decline follows.

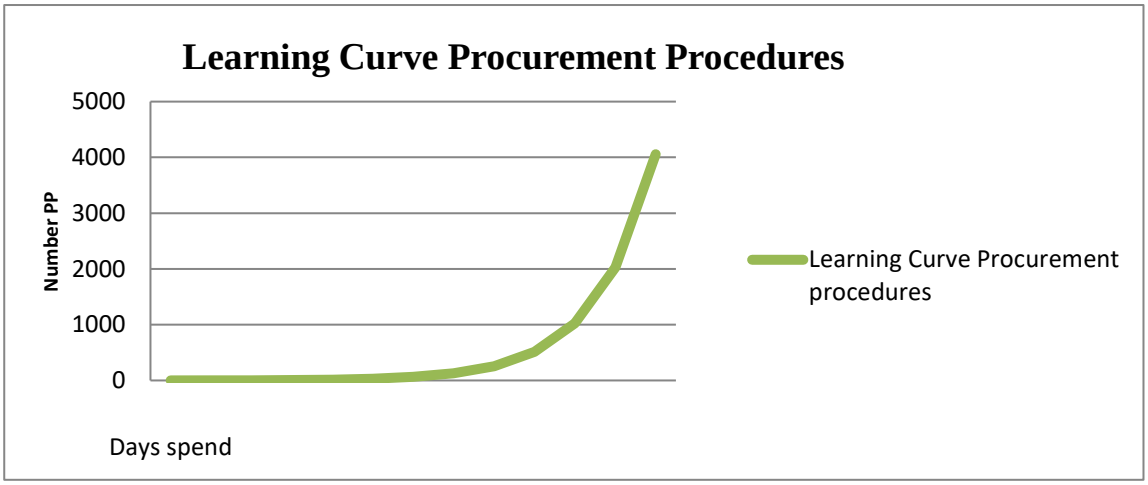


Figure 5-4 Learning Cure Procurement Projects and Days Spend

The expression $PC_n = PC_1 * (n^b)$ (1)

can also be converted into the logarithmic form to give the straight-line relationship:

$$\log_e PC = \log_e PC_1 + b * \log_e n \quad (2)$$

The slope of the straight line is *b*, and this can be rewritten as:

$$b = \frac{\log_e PCn - \log_e PC1}{\log_e n} \quad (3)$$

If Lc denotes the learning rate, the value of b can be calculated considering the days spent to executing the first procurement procedure, and the time spent executing the second procurement procedure. The time to execute the second procurement procedure is given by PC_1 * Lc. Substituting this expression for PC_n in the equation for b gives:

$$b = \frac{\log_e PC2 - \log_e PC1}{\log_e n2} = \frac{\log_e PC2 * Lc - \log_e PC1}{\log_e 2} \quad (4)$$

$$b = \frac{\log_e PCn + \log_e LC - \log_e PC1}{\log_e 2} = \frac{\log_e LC}{\log_e 2} \quad (5)$$

For an 95% learning rate, Lc = 0.95

$$b = \frac{\log_e LC}{\log_e 2} = \frac{\log_e 0.95}{\log_e 2} = \frac{-0.05}{0.6931} = -0.07 \quad (6)$$

That is a negative slope indication that days spent decreases as the number of procurement procedures increases until the optimum point mentioned in Figure 5-4.

Substituting this value (6) in the exponential equation gives:

$PC_{200} = 10 * 200^{-0.07} = 6.90$

The learning concept in executing procurement procedures has been demonstrated above. From this calculation, days spent for any number of executed procurement procedures can be determined. Similar calculations can be made for other learning principles in procurement business processes.

The existence of the learning rate in procurement processes has been recognised in the analysis of the interviews and quantitative analysis of the present study.

"Procurement costs have diminished extremely for my LA by joining the SCP"

Interviewees A, B, C, D, E, F & G

It has been noted that savings on project costs, budget investment costs and maintenance costs can be measured by LAs and their SCP. On the other hand, three of this study's interviewees stated that there is no access to equal project management information of comparable individual costs for their LA.

"The savings and gains are plausible but not measured… and there is a lack of synchronisation of the results."

Interviewees A, B, & D

In-depth analysis in Chapter 4, regarding efficiency and inefficiency has been explored in JPGs compared with similar individual procurement projects. This analysis, viewed in Table 4-1, confirms the feelings of the interviewees and the questionnaire that SCP in the case of JPG reduces procurement costs, compared with individual similar purchases.

This research reveals the characteristics of 'outsourcing' and structurality in collaboration (Williams, 2013). SCPTC3, *"LAs have lower management costs regarding their procurement function",* has not been tested in the literature review but from the view of business practice general collaboration literature. It is found to have a strong factor loading in the dimension/component cost reduction. Previous works in the literature mostly found evidence of reduced operational, administrate costs and IT cost (Bals & Turkulainen, 2017). Brewer et al. (2014) found an explanation based on a degree of resource position and opportunism in outsourcing procurement activities based on the framework of McIvor (2009) divided in the stages of the procurement processes as shown in Figure 2-5. Variable SCPTC3 indicates that SCP reduced procurement management costs in the sourcing phase for LAs. On the other hand, another interesting finding from the case study, represented in Figure 4-3, is that the costs in JPGs are separated in stages of the procurement process. Communication costs and costs in the pre-stage of procurement processes have an increasingly proportional character with the more LAs participating in the JPG, the greater the costs of these components for each participating LA. The consolidated procurement costs (pre-stage, sourcing and contract management stage) decrease as the number of LAs in the JPG increases (Albano & Sparro, 2010; Dyer, 1997; Karjalainen, 2011).

The assessment of process costs is completed by finding out the time spent on the tendering process for both the LA operating model (where each LA tenders their own contract) and the JPG (where one contract is tendered for more than one LA) and estimating the associated costs. The tendering processes were both executed via SCP and in accordance with Dutch and European procurement law.

Comparative analysis has been conducted to measure time spent tendering in the single LA tenders and the JPG to measure the cost effects of collaboration. The time spent tendering is measured separately in a compatible IT time registration system.
Multiple overlapping tendering processes imply a significant increase of the process costs of procurement in comparison to tendering one contract for more than one LA. The differences in costs, Δ PCDI PCDJPG, as shown in Table 4-1, are affected in the stage of the procurement of the procurement process specified in Figure 4-3.

5.2.6 Summary

White et al. (2016) found that public organisations did not perceive procurement to be a value-adding function but merely the execution of administrative tasks. This study, by contrast, shows that procurement functions can be improved by delivering six value aspects (knowledge, profession, reputation, product innovation, economies of scale and quality of services) through the use of SCP. Therefore, this study highlights the value that SCP adds to procurement functions.

In the sections to follow, the quantitative findings of this study will be discussed. Grounded in statistical analysis, the key variables will be highlighted and arranged into an order that helps to determine a framework.

5.3 Challenging the Research Objectives from a Solely Quantitative View

In this deductive approach, the research objectives and hypotheses have been derived from gaps in the literature relating to structural collaborative procurement. The scales to measure the procurement performance of LAs were analysed in chapter 4. The extrapolative quality of the six dimensions of actors of SCP have been tested using regression analysis, using the procedures of Pallant (2010). In this section, firstly the factor and regression analysis are viewed, secondly the three research objectives are discussed and tested to provide generalised answers.

Chapter 4 investigated the factor loadings (extracted values of each item under six variables) of the 37 variables on the six factors extracted. The higher the absolute value of the loading, the more the factor contributes to the variable. Loadings less than 0.5 were suppressed as well as analysed in Chapter 4. Figure 5-5 shows the correlations

between the dimensions/components measured >0.5. Factor analyses provided empirical support for the six dimensions and highlighted the key variables affecting the SCP in these six dimensions. This established evidence of content validity. Further, the SCP's construct validity was apparent by the positive association of each of the dimensions with enablers of structural collaborative procurement. Additionally, in Chapter 4 each of the factors' reliability for consistency across the sample for generalisability was examined (Pallant, 2010, pp. 187-201). This section examines each of these dimensions.

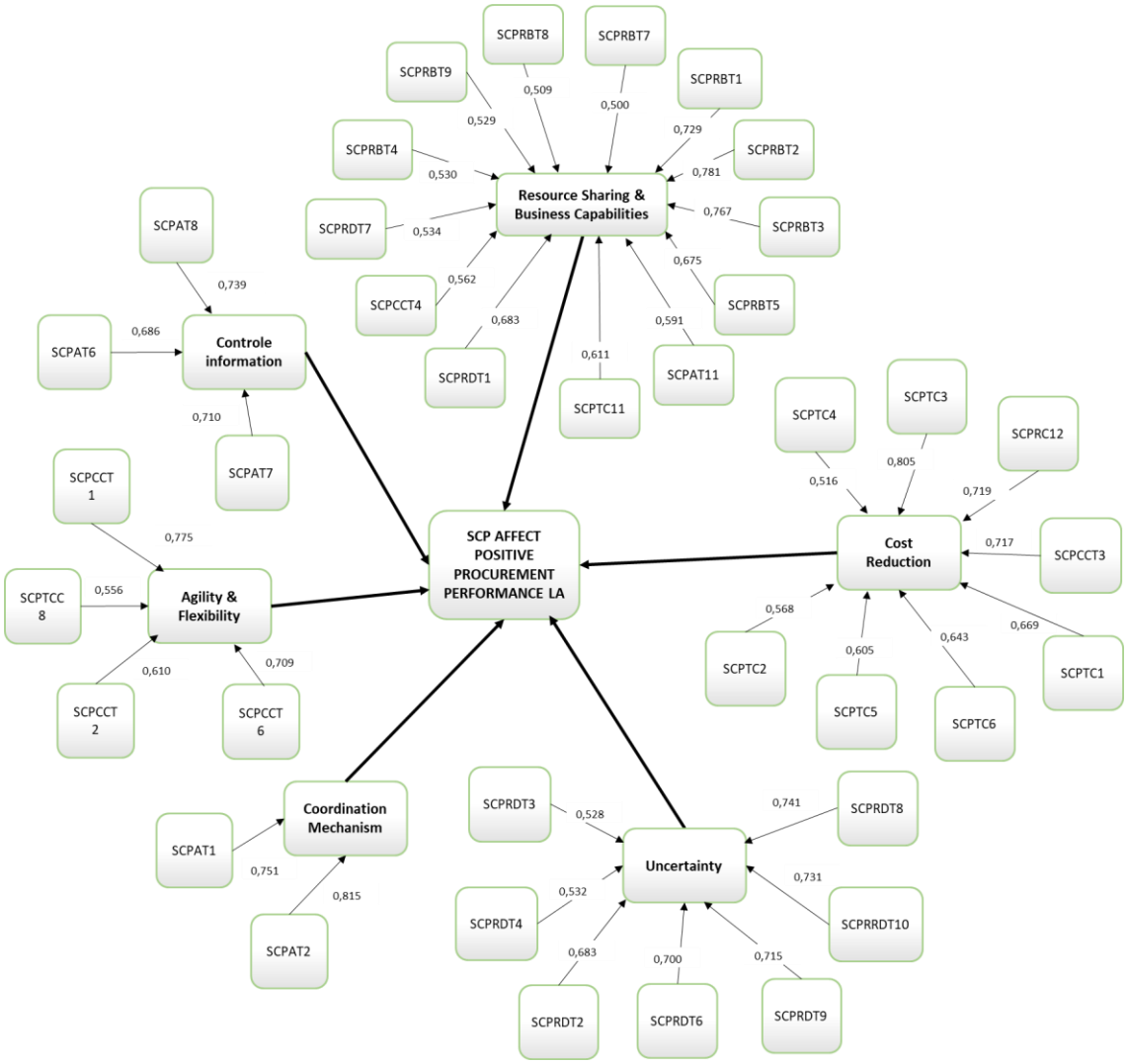


Figure 5-5 Best Variables in Outcome by Factor Analyses

5.3.1 To what extent does collaboration lead to more value in the internal business processes of the procurement function (RO1)?

In this section, the factors have been analysed which answer this study's first research objective. The dimensions Resource sharing & business capabilities and Agility and flexibility are connected to this objective.

Resource sharing & business capabilities

Table 5-11 displays the variables/items which have been measured in the factor loading analyses in chapter 4 via the quantitative questionnaire.

Table 5-11 Variables - Resource Sharing and Business Capabilities

Variable/Item	Economical Theory	Description
SCPRBT2	RBT	LAs have access to dedicated personnel to manage the collaborative process by the SCP.
SCPRBT3	RBT	LAs have access to professional procurement specialists to manage individual procurement projects through SCP.
SCPRBT1	RBT	LAs use cross-organisational structural teams for process design and improvement through SCP.
SCPRBT5	RBT	LAs have more access to product/technological developments by the SCP.
SCPRDT1	RBT	LAs share/get access to critical/special procurement knowledge, expertise and resources through SCP.
SCPTC11	TC	LAs have more standardisation and uniformity in procurement services through SCP.
SCPAT11	RBT	LAs have access to legal tender helpdesks through SCP.
SCPCCT4	RBT	LAs can focus more on the content of their products/services through SCP.
SCPRDT7	RBT	LAs have more access to professional procurement experts and less external procurement consulting through SCP.
SCPRBT4	RBT	LAs share technical knowledge through SCP
SCPRBT9	RBT	Civil servants of local governments are indirectly trained in business skills of the collaborative procurement organisation by the SCP.
SCPRBT8	RBT	LAs pool procurement and knowledge (training, time, money etc.) through SCP.
SCPRBT7	RBT	LAs have better relationships with suppliers through SCP.
SCPTC7	TC	LAs reduce failures in procurement procedures through SCP.
SCPRBT6	RBT	LAs have access to dedicated personnel to manage the collaborative process through SCP.

The first factor involved the availability of Resource sharing & Business capabilities. Participants in this study represented the accessibility of professional procurement experts, delivered through SCP, in their organisation for solo procurement projects as

well as for joint purchase groups. Also, the resource of more critical special procurement knowledge, like the commodities, social care, youth care, rubbish management, IT and buildings. Similarly, the use of innovative multi-functional procurement teams through SCP for improvements or innovative procurement projects has been recognised as a latent variable, which has an effect on Resource sharing & Business capabilities (Rainville, 2016). Furthermore, the use of legal tender services for procurement has been recognised as a remarkable source SCP for LAs. Also, the pooling of procurement expertise and capacity has been recognised as Resource sharing & Business capabilities (Bals & Turkulainen, 2017). Central execution of IT equipment and sharing procurement business information between LAs through SCP has been recognised as a latent item, which contributes to Resource sharing & Business capabilities (Borman & Janssen, 2013).

Besides the services provided by SCP, LAs professed the positive effects of these services on their procurement functions. The participants of this study perceive a positive correlation between more benefits for LAs in terms of product development, increased standardisation and uniformity in procurement services, increased professional expertise and therefore the need for fewer external commercial procurement consultants. A participant in this study noticed the contribution in exchange of procurement expertise between the SCP and the civil servants of the LAs (Dewah & Mutula, 2014).

From a deductive perspective, these findings can be traced back and explained using two theories set out in chapter 2, which are the backbones of this research – namely the RBT, and the TCT (Coase, 1937; Wernerfelt, 1984). This factor/dimension is theoretically mainly supported by the RBT through sources of power of complementary resources and capability. This is measured via the key performance indicators: data benchmarking of procurement information as strategies, specifications, contracts, and key performance indicators, jointly using E-procurement systems, indirect transfer of procurement skills, training, and decentralised availability of procurement practitioners.

From theoretical considerations, this factor dimension is founded through sources of power of diminishing business risks, whereby the respondents mentioned that they are

more able to focus on core competences and material and content aspects instead of procurement (Barney, 2001; Hamel & Prahalad, 1990).

The resources aspects contribute to the LA in terms of access for critical/special procurement knowledge and resources through an SCP. Theoretically, the SCP's source of power diminishes the dependence, which can make the business process less uncertain (Emerson, 1962; Malatesta & Smith, 2014) and less dependent on external commercial procurement consultants (Subramaniam, Collier, Phang, & Burke, 2011). TCT supports greater standardisation and uniformity in the procurement services provided, which contributes to greater efficiency in the procurement business processes (Coulson, 1997; McIvor, 2009). However, these findings also indicate that this applies to a lesser extent to larger LAs. This study provides a *detailed* overview of the procurement expertise that an LA can access when it is affiliated with an SCP. Earlier studies such as those by (Walker et al., 2013) reviewed several enablers of collaborative procurement. This research contributes by extending these enablers, including less dependence on external procurement consultants, added access to product/technological developments, extra-legal procurement resources and access to dedicated personnel to manage the collaborative process. Though the present study is restricted to local government organisations, this could also be taken as an opportunity to gain professionalism resources in-house.

Agility and flexibility

Table 5-12 displays the variables/items which were measured in the factor loading analyses in Chapter 4.

Table 5-12 Variables - Agility and Flexibility

Variable/Item	Theory	Description
SCPCCT1	RBT	LAs have quicker new and innovative product/services through SCP.
SCPCCT2	RBT	LAs have more flexibility and agility regarding ad hoc demands through SCP.
SCPCCT6	RBT	LAs have greater access to innovation in their products/services/works by outsourcing the procurement function through SCP.
SCPTC8	TCT	LAs have a shorter cycle time during execution of procurement procedures through SCP.

The fifth factor, agility and flexibility, is related to the ability to be flexible in procurement processes when there is a high act of power uncertainty on the part of LAs. This factor affects speed and flexibility of deliveries, supply of innovative public products to the citizens, and fast response to political demands (Freytag et al., 2012). LAs show that SCP is capable of responding rapidly to unpredictable demand. Also, LAs perceive a faster cycle time of individual procurement procedures by outsourcing these activities to the SCP (Gottschalk & Solli-Sæther, 2005). Concentration on core competence activities in combination with extending the activities of LAs has led to outsourcing of this specialism (Hamel & Prahalad, 1990). The core competence of public function for professional procurement of those outsourced activities of LAs, is the SCP. This can be in the area of services, health and social care, infrastructure and safety. SCP gives LAs the ability to combine the power of several highly specialised procurement contributions into a single, flexible, value-adding entity. Research by Paagmana et al. (2015) indicates limited attention for innovation, although they suggest in the future including innovation as an achievable value for SSCs. An answer on this is that LAs attribute innovation, flexibility and cycle time to the approach of the SCP. In this study, business managers, who were responsible for the output product/services, were for the questionnaire, and they felt the urgency of the politics directly. Paagmana et al. (2015) studied managers of finance and IT, who were indirectly involved with the output /services. Possible interpretations include the effective involvement of the SCP in the direction and primary procurement projects.

5.3.2 To what extent does collaboration lead to less uncertainty in the procurement function (RO2)?

In this section, the factors have been analysed which answer this study's second research objective. The dimensions Control of information and Uncertainty are connected to this objective.

Control of information

Table 5-13 displays the variables/items which have been measured in the factor loading analyses in chapter 4.

Table 5-13 Variables - Control of Information

Variable/Item	Theory	Description
SCPAT6	TCT	LAs make annual joint procurement plans with their SCP.
SCPAT7	TCT	LAs jointly control and update SCP procurement plans periodically.
SCPAT8	TCT	LAs jointly decide about exceptions and deviations regarding joint procurement plans.

Finally, the dimension 'control of information' is founded on the three variables related to the management mechanism planning. The establishment of annual joint procurement plans has been recognised to control LAs' demands for procurement information. The individual procurement plans have been devolved from the LAs' strategic council program and the strategic financial forecast. Within the context of this long-term and rough-cut planning, demand needs to be translated into the operational requirements of individual LAs and their operational divisions. These plans contain the capacity and items to complete the services. Although collaborative LAs are a similar type of public organisation, Hill (2005, pp. 335-336) explained why organisations cannot have identical operation control systems. This can make it more complex to consolidate LAs' individual procurement plans. On the other hand, the internal span of the procurement process of LAs is renowned by purchasing final products and services from outside, making the operational plans of the internal process simpler (Harland et al., 2005). The former two recognised variables have a more upkeep character of the annual consolidated procurement plan. These have been acknowledged as necessary to keep the procurement plan updated. This dimension and the variables related to it demand that a dynamic collaborative procurement plan is in place between LAs. This provides insight into the resolution of steering problems between LAs in SCP (Eisenhardt, 1985). The SCP has to juggle the goals and demands of all of the LAs involved. Differences in goals makes it difficult to serve all members' demands. Therefore actual, dynamic consolidated procurement plans are necessary besides trust between LAs mutually and SCP. SCP will become more powerful over the long term; in addition, those who perform procurement activities are by definition closer to the source of information (Hudson et al., 1999). The research by Kastberg (2014) addressed the problems of collaboration for coordination. However, there were also problems of a more coordinative nature and connecting to the problem of securing communication flows

between the participants. This is not to say that it frames the relations between established LAs, but more that it is significantly about framing and stabilising these organisations through a structure that is in control of information.

Uncertainty

Table 5-14 displays the variables /items which have been measured in the factor loading analyses in Chapter 4.

Table 5-14 Variables - Uncertainty

Variable/Item	Theory	Description
SCPRDT8	RBT	LAs have more volume together in the market through SCP.
SCPRDT10	RBT	LAs hitchhike on the collaborative brand of SCP.
SCPRDT9	RBT	LAs use legitimacy via SCP organisations.
SCPRDT6	TCT	Procurement processes are more transparent through SCP.
SCPRDT2	TCT	LAs have more buying power regarding strategic contract terms through SCP.
SCPRDT4	TCT	LAs have more control over information/positions in communication flows through SCP.
SCPRDT3	TCT	LAs have more awareness of alternative specifications/demands through SCP.

The third factor, uncertainty in the business function, covers a wide scope. Here, uncertainty predominantly concerns the degree of dependence on the selling power of enterprises. The test here is that collaborations based on structural jointly resource consolidate, serve a mutual benefit and, over time, decrease uncertainty for organisations over their resource supply (Pfeffer & Salancik, 1978). Besides the benefits of buying power and more volume mentioned above, less obvious arguments have also been stated. In previous research, LAs have been seen to adopt collaborative mechanisms such as SCP in order to reduce uncertainty and increase their legitimacy (Malatesta & Smith, 2014). This is in contrast to the study by Pazirandeh and Herlin (2014), in which the drop-out of one of the buyers disturbed the benefits that increased volume could have brought for the group. One interpretation could be that structural collaboration, such as an SCP, could prevent that by reducing non-commitment. Meehan et al. (2016) provides insight into ‘a border’ between the technical and

procurement staff, which hampered the functionality of the specifications. This study reveals the entrance for alternative specifications through the SCP. One interpretation could be the homogeneity between the LAs in this study, which is in contrast with Meehan's study Meehan et al. (2016).

5.3.3 To what extent does collaboration lead to cost reduction in the procurement function (RO3)?

In this section, the factors have been analysed which answer the third research objective. The dimensions Cost reductions and Coordination and mechanism are connected to this objective.

Cost reductions

Table 5-15 displays the variables/items which have been measured in the factor loading analyses in Chapter 4 via the quantitative questionnaire.

Table 5-15 Variables - Costs Reduction

Variable/Item	Theory	Description
SCPTC3	TCT	LAs have less management costs for procurement functions through SCP.
SCPTC12	TCT	LAs have more financial cost savings through SCP.
SCPCCT3	TCT	LAs have lower costs through outsourcing procurement functions through SCP.
SCPTC1	TCT	LAs have lower procurement and transaction costs through SCP.
SCPTC6	TCT	LAs have lower external-independent costs for legal advice regarding procedures or contracts through SCP.
SCPTC5	TCT	LAs have fewer costs for external procurement consults through SCP.
SCPTC2	TCT	LAs have lower procurement contract management costs through SCP.
SCPTC4	TCT	LAs have lower procurement IT costs through SCP.

The second factor was structural collaborative procurement and cost reduction. LAs recognise that structural collaborative procurement involves cost reduction (Murray et al., 2008). These findings support and guide the findings of the qualitative study found earlier in this chapter. The findings of the interviews and case study are generalised by

the quantitative study. The case study also provides fundamental detailed comprehensive facts and figures about quantitative potential savings by collaborative arrangements on transaction cost by JPG and procurement IT systems. The study by Janssen and Joha (2006) and also recent research by Richter and Brühl (2017), which made a further development to output-orientated perspective, confirm the variable of lower IT costs. Paagmana et al. (2015) signalled the first collaborative needs 15 years ago. The difference is that the SSC started from the centralisation of secondary supporting services in the Netherlands, mainly IT, human resources management and facility procurement. However, this could also be taken as an outsourcing construct for supporting operational activities. This research confirms cost-efficiency for the primary business procurement function, also for the direct public services.

On the other hand, the quantitative study also found cost savings in managing the procurement function. Similarly, cost savings were found for LAs from managing procurement contracts and outsourcing procurement functions. Possible interpretations include strategical, tactical, operational and legal procurement activities.

It thus appears that in the context of SCP, the TCT and TCT theoretical lenses have a more nuanced relationship than linear, as suggested in the mind map in chapter 2. These quantitative findings suggest that TCE and RBT will reinforce one another when they offer complimentary forecasts. The fear of opportunism appears to determine the extent of procurement outsourcing, while the stage of structural or initial collaborative resource position is a better predictor of the procurement performance resulting from decision to outsource procurement to SCP (Brewer et al., 2014).

Coordination and mechanism

Table 5-16 displays the variables/items which have been measured in the factor loading analyses in Chapter 4.

Table 5-16 Variables - Coordination and Mechanism

Variable/Item	Theory	Description
SCPAT1	TCT	LAs agree on procurement goals and strategies in SCP.
SCPAT2	TCT	LAs agree how JPG should be executed in SCP.

Coordination and mechanism, the fourth factor, encompass two commitments, which are conditional on the performance of the structural collaboration (Schalk, 2013). When no goal conflict exists in a collaborative relationship, SCP will perform as expected (Eisenhardt, 1989). Management coordination mechanisms such as annual procurement plans and guidelines for rules and procedures for the execution of JPG can be more attractive than outcome-based mechanisms (Eisenhardt, 1989). From the view of the TCT, the effectiveness of the collaborative arrangement is served by formal commitments of goals and strategies of JPGs. If there is no goal conflict and if the objectives are generally agreed, the collaboration can behave most effectively, as the LAs would like, to the benefit of the LAs (Eisenhardt, 1989).

This dimension, coordination and mechanism, supports the earlier research of Eisenhardt (1989). TCT is most relevant in situations in which contracting problems are challenging. In this thesis in which there is substantial goal conflict between LAs, such that SCP opportunism or the opposite, risk aversion is likely. Opportunism can lead in this context to where the outcome of the JPG does not fit with the demands of the LAs or does so only partially, or where procurement policies have been trimmed. In such instances, innovation, green procurement, aspects of quality, business concepts and sustainability may have been affected during the execution of the JPG (Pazirandeh & Herlin, 2014). Besides the differences in policies between LAs, diversity between JPG objectives can cause this through the degree of insourcing or outsourcing of activities (Bals & Turkulainen, 2017) in individual LAs and thus in no synchronised specifications of the demands of the JPG (Schotanus et al., 2010).

Alternative management mechanisms are mentioned in the factor analyses as a latent variable that explains coordination and mechanism. Explicit commitments and guidelines about how JPG is to be executed are necessary for decent coordination and mechanism during the execution of JPGs. Therefore, agreements and commitments force LAs to consider standard supply procedures in SCP for additional efficiency in the execution of JPGs (Caers et al., 2006). An earlier study by Meehan et al. (2016) showed that bundled national framework agreements had a suffocating effect on LAs, because they were not linked with the local market and the demands of heterogeneous public organisations. Alternatively, it could be an effect of compulsory participation and shortage binding with participants.

5.4 The Guiding Hypotheses and the Research Objectives

The effectiveness and efficiency of the SCP cooperation concept have been given direction and studied by the three hypotheses. Hypotheses 1 and 3 provide insight into which dimensions and variables affect *structure* and *coordination* in the collaboration concept. Hypothesis 2 tests the added value of the SCP for the LAs and is directly connected with the three research objectives.

The predictive assessment of the six dimensions of collaboration for structural procurement organisations has been tested through regression analysis. Similarly, the extrapolative quality of the six dimensions of actors of SCP has been tested through regression analysis, based on (Green & Salkind, 2014) and (Pallant, 2010). Figure 5-6 shows this regression analysis with probability $p < 0.05$.

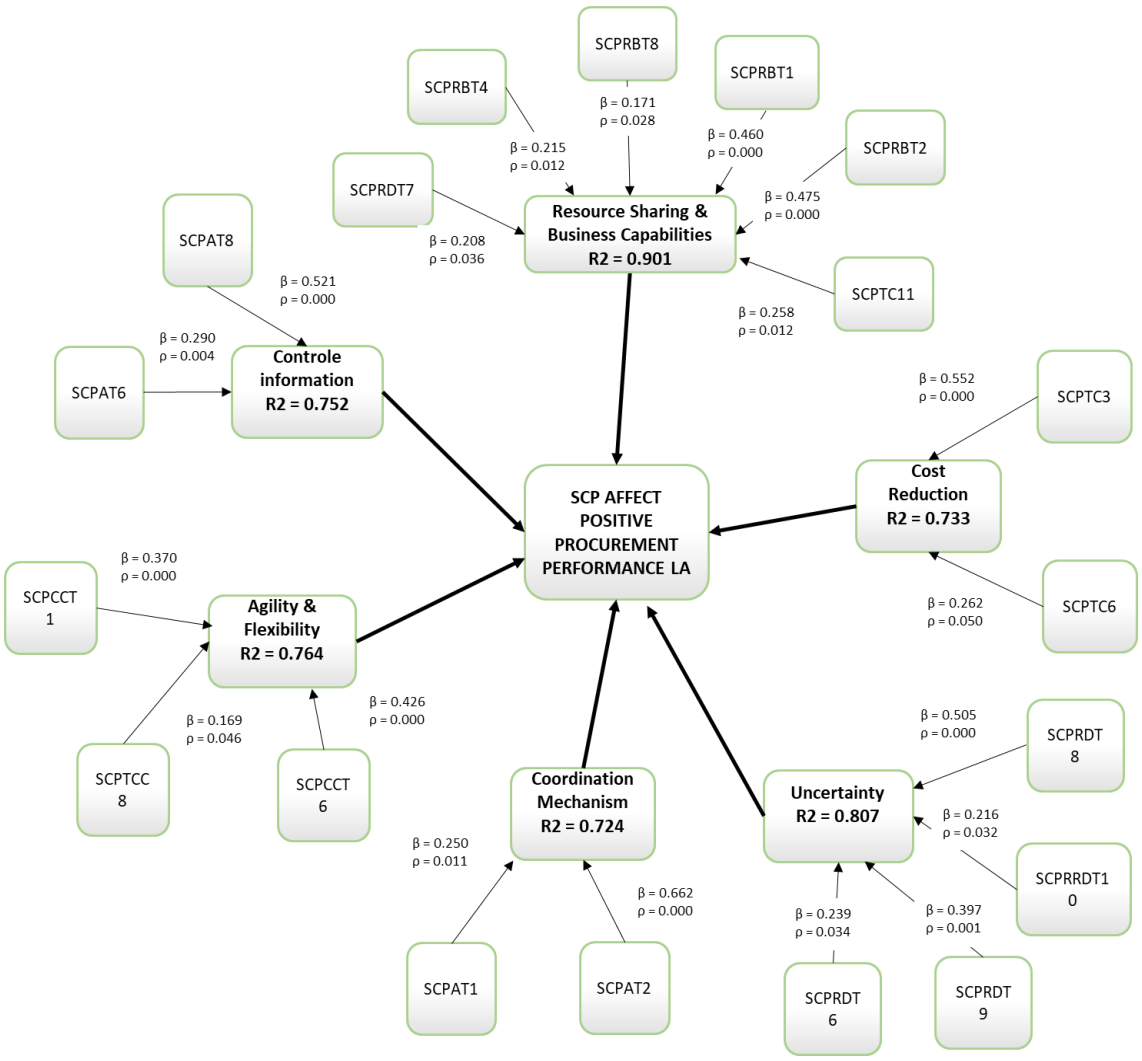


Figure 5-6 Best Predictive Variables in Outcome by Multiple Regression Analyses

In Table 5-17, the dimensions are linked to the guiding hypotheses, which explain the research objectives of this study.

Table 5-17 Hypothesis related to the Research Objectives

Research objectives	Dimensions (factor analysis)	Guiding hypothesis (regression analysis)
To what extent does collaboration lead to more value in the internal business processes of the procurement function (RO1)?	Resource sharing & business capabilities	Hypothesis II
	Agility and flexibility	
To what extent does collaboration lead to less uncertainty in the procurement function (RO2)?	Control of information	Hypothesis II
	Uncertainty	Hypothesis III
To what extent does collaboration lead to cost reduction in the procurement function(RO3)?	Procurement costs	Hypothesis II
	Coordination mechanism	Hypothesis I

In the next section, the underlying variables of the hypotheses will be explained related to the research objectives.

5.4.1 Hypothesis 1

Structural collaborative procurement has a significant positive effect on collaborative benefit

It adds a *strategic structural* organisation to the effective performance of the collaboration. This has been tested by the hypothesis through a regression from the variables of the dimension ‘coordination mechanism’.

Coordination Mechanism

Two related variables have a positive contribution to the performance of SCP in the dimension "Coordination Mechanism".

Table 5-18 Multi-Regression Coordination Mechanism

Model/Item	Model Coordination Mechanism	SCPAT1	SCPAT2
R	.851		
R2	.724		
Adjusted R2	.714		
Std. error of the estimate	.525		
F	73.490		
Sig.	.000	.000	.011
B		.662	.250

- SCPAT1, LAs have agreed procurement goals and strategies in the SCP.
- SCPAT2, LAs have agreed how to execute joint procurement groups in the SCP.

The results in Table 5-18 support Hypothesis 1. The regression β figures are .662 and .250, which is statistically significant at the level of 0.000 and 0.011. This supports the claim that coordination mechanism in structural collaborative procurement has a significant positive effect on collaborative benefits. Hypothesis 1 is confirmed.

The instrument *structure* in the collaboration has been recognised as a positive effect on the benefits of collaboration. Structure forms the line of commitment about goals, strategies and how to execute JPGs in the SCP. The variable SCPAT1 involved agreed procurement goals and strategies, such as green procurement, social aspects and savings. Harmonisation of goals and strategies contribute to the efficiency and effectivity of the collaboration. This corresponds with the investigation by Patrucco et al. (2018) of the degree of structure and the level of centralisation of the procurement function and attention for strategic procurement goals. The research by Kastberg (2014) recognises risks of goal incongruence in the public sector and argues for a more explicit awareness of processes of defining the joint services, which is similar to the variable SCPAT2 of this study. In sum, agreements on structure of the SCP include: agreements of procurement goals and strategies and agreements on how to execute joint

procurement groups, which have an impact on the efficiency in the collaborative concept, and influence cost reduction.

5.4.2 Hypothesis 2

The collaborative benefit has a significant positive effect on the procurement performance of the individual local government organisation.

The essential condition for structural procurement collaboration, SCP, is that the members of collaboration are able to increase their total value through cooperation and gain these benefits into their individual procurement performance of their individual local government organisation. In the short term, local government organisations will see operational enhancements, such as an improvement in productivity (Borman & Janssen, 2013; Janssen & Joha, 2008; Janssen et al., 2007). In the long term, local governments expect more (product) innovation, more access for start-up and SME entrepreneurs to public tenders, more professionalism among staff, fewer legal complaints, shorter cycle times to execute procurement tenders, more value from procurement procedures, less operational business risk, and lower costs (McIvor et al., 2011; Nehmelman, 2015; Pazirandeh & Herlin, 2014).

This hypothesis has been tested through a regression from the variables of the dimension coordination mechanism. Chapter 4 provides the necessary static tests using SPSS. Hypothesis 2 is supported as outlined below – resource sharing/business capabilities, procurement costs etc. – and has a significant explicable impression of the collaborative benefits that have a positive effect on procurement performance of the LAs.

Resource sharing/Business capabilities

Therefore, six variables have a *positive contribution to the performance of SCP* from the dimension *Resource sharing & Business capabilities.*

Table 5-19 Multi Regression, Resource Sharing and Business Capabilities

Model/ Item	Model Resource Sharing/ Business Capabilities	SCPRBT2	SCPRBT1	SCPTC11	SCPRDT7	SCPRBT4	SCPRBT8
R	.949						
R2	.901						
Adjusted R2	.864						
Std. error of the estimate	.375						
F	23.988						
Sig.	.000	.000	.000	.012	.036	.012	.028
β		.475	.460	.258	.208	.215	.171

- SCPRBT2, LAs have access to dedicated personnel to manage the collaborative process through SCP.
- SCPRBT1, LAs use cross-organisational structural teams to design and improve processes through SCP.
- SCPTC11, LAs have more standardisation and uniformity in procurement services through SCP.
- SCPRDT7, LAs have more access to professional procurement experts and less external consultants through SCP.
- SCPRBT4, LAs share technical knowledge through SCP.
- SCPRBT8, LAs pool procurement and knowledge (training, time, money etc.) through SCP.

There is a statistically significant difference between *the number of inhabitants* of LAs and the contribution of Resource sharing & Business capabilities of the SCP for the LA. This is intensified by the relative LA performance benefit hypothesis 2, where collaborative benefit has a significant positive effect on the procurement performance of the individual local government organisation.

This is in line with the extended RBT view that inter-firm learning, knowledge and capacity (Sergeeva & Andreeva, 2015) is demanded in other related business areas and

thus generate more spill-over rents for small and medium LAs than large LAs (Allers & Van Ommeren, 2016).

Procurement costs

Two related variables have a *positive contribution to the performance of SCP*, in the dimension *Procurement Costs.*

Table 5-20 Multi Regression, Procurement Costs

Model/Item	Model Procurement Costs	SCPTC3	SCPTC6
R	.856		
R2	.733		
Adjusted R2	.683		
Std. error of the estimate	.554		
F	14.912		
Sig.	.000	.000	.050
B		.552	.262

- SCPTC3, LAs have fewer management costs when their procurement functions are carried out by SCP.
- SCPTC6, External-independent costs of legal know-how of procedures or contracts.

Agility and flexibility

Three related variables have a positive contribution to the performance of SCP, in the dimension *Agility and flexibility.*

Table 5-21 Multi Regression, Agility and Flexibility

Model/Item	Model Agility & Flexibility	SCPCCT1	SCPCCT6	SCPTC8
R	.874			
R2	.764			
Adjusted R2	.746			
Std. error of the estimate	.502			
F	43.587			
Sig.	.000	.000	.000	.046
β		.370	.428	.169

- SCPCCT1, LAs have new and innovative products/services more quickly through SCP.
- SCPCCT6, LAs have more access to innovation in their products/services/works by outsourcing their procurement to SCP.
- SCPTC8, LAs have shorter cycle times during the execution of procurement procedures through SCP.

Uncertainty

Four related variables have a *positive contribution to the performance of SCP*, in the dimension "Uncertainty".

Table 5-22 Multi Regression, Uncertainty

Model/Item	Model Uncertainty	SCPRDT8	SCPRDT10	SCPRDT9	SCPRDT6
R	.898				
R2	.807				
Adjusted R2	.781				
Std. error of the estimate	.402				
F	30.468				
Sig.	.000	.000	.032	.001	.034
B		.505	.216	.397	.239

- SCPRDT8, LAs have more volume in the market together through SCP.
- SCPRDT10, LAs gain legitimacy from SCP.
- SCPRDT9, LAs hitchhike on the collaborative brand of the SCP.
- SCPRDT6, Procurement processes are more transparent in SCP.

The results in Table 5-19, Table 5-20, Table 5-21 and Table 5-22 support Hypothesis 2. The regressions R2 are .901, .733, .764 and .807, which are statistically significant at the level of 0.000. This supports the claim that resource sharing & business capabilities, procurement costs, agility and flexibility, and uncertainty in structural collaborative procurement have a significant positive effect on the procurement performance of individual LAs. Hypothesis 2 is confirmed, with the intensification that collaborative benefits of the dimension resource sharing/business capabilities for large LAs differ to small and medium LAs.

As mentioned before, this hypothesis is directly linked to the output of the three research objectives. In the factor analysis of the SCP, six dimensions were identified. Four dimensions were linked with this hypothesis and explain the research objectives.

Objective more value

The factor Agility and Flexibility involved access to innovation in products/services/works and faster realisation. Participants in this study depicted agility and access to innovation as results of the SCP. This is in contrast with the study by Meehan et al. (2016). They mentioned that tension between stakeholders could cause incongruence goals, which hamper the collaborative procurement value.

Objective less uncertainty

Variable SCPRBT2 involves access to dedicated personnel to manage collaborative processes. In previous research, dedicated personnel has been linked to outcomes of professionalism of the staff at the SSCs (Richter & Brühl, 2017). The dimension of uncertainty-linked consolidation of demands provides buying power, especially in monopolistic or oligopolistic markets. This corresponds with the research of Walker et al. (2013), although they also demanded chances for SMEs. Involvement of the factor Resource sharing/Business capabilities encompassed many aspects of being a member of SCP. The availability of procurement experts to manage the collaborative procurement process was a significant variable, corresponding with an earlier study of Albano and Sparro (2010), they extended the expertise through cross-functional organisational procurement teams, which is also recognised in this study.

Objective cost-reduction

The factor of procurement costs involves perceiving to what extent collaboration leads to cost reduction in the procurement function. In the previous study by Karjalainen (2011) evidence was found of savings in internal procurement costs. The effects, although from a centralisation point of view, contain tendering process costs (economies of process). Besides confirmation of these findings, the reduction of procurement management costs was perceived in the current study. Reduction of costs was also powerfully influential in outsourcing of procurement in Ghodeswar and Vaidyanathan (2008). Lower legal consultants' costs were recognised in this study,

through removing legal resources from outsourced external consultants to the SCP (Knol et al., 2014).

Standardisation and uniformity, SCPTC11, involves efficiency, thus stimulate cost reduction in the procurement function of LAs. This parallels the findings of Borman and Janssen (2013), who determined that standardisation, as well as contract discounts, can be accessed effectively and operating expenses reduced.

In short, the SCP includes benefits that have a significant positive effect on the procurement performance of the individual local government organisation: resource sharing & business capabilities, procurement costs, agility and flexibility, and reduced uncertainty. Although each dimension in itself provides valuable information, the full contribution to the PP can further offer data to organisations about the success or insufficiencies of structural collaboration in procurement activities.

5.4.3 Hypothesis 3

Coordination between structural collaborative procurement and the individual local government organisation moderates the procurement performance of a local government organisation.

Conversely, collaboration between local government organisations increases additional costs, if not managed well. These can include the cost of coordination, compromise, inflexibility and doing parts of the procurement function twice (Karjalainen, 2011). The effect of structural procurement collaboration on collaborative benefits and procurement performance is complex and many-sided. Harmonisation between individual local governments and collaborative procurement organisations is an important issue of this multi-faceted and intricate procurement collaboration (Pazirandeh & Herlin, 2014).

This hypothesis has been tested through a single regression from the variables of the dimension coordination mechanism. Chapter 4 provides the necessary static tests using SPSS.

Control of information

Two related variables have a positive contribution on the performance of SCP, in the dimension *Control of information.*

Table 5-23 Multi Regression, Control of Information

Model/Item	Model Control of information	SCPAT6	SCPAT8
R	.867		
R2	.752		
Adjusted R2	.739		
Std. error of the estimate	.526		
F	55.739		
Sig.	.000	.000	.004
β		.521	.290

- SCPAT6, LAs make annual joint procurement plans with the SCP.
- SCPAT8, LAs jointly decide exceptions and deviations regarding the joint procurement plan.

Coordination and harmonisation have been recognised in the dimension Control of information. Meehan et al. (2016) noted in their latest research the lack of quality procurement information, which hampers the performance of the collaborative arrangements between regional, national/government, and other public partners in the UK. Another study on this dimension by Pazirandeh and Herlin (2014) asserts that deviations during joint procurement project can disrupt both demand and supply understanding for suppliers and also buyers. This parallels the findings of this hypothesis, which indicated that the presence and actualisation of annual joint procurement plans contribute to the performance of the SCP and have an impact on the degree of uncertainty of the SCP.

A MANOVA analysis showed that there is a statistically significant difference between *the number of inhabitants* of LAs and the contribution of control of information by the SCP for the LA. Additionally, the study by (Grossi, Mori, & Bardelli, 2014) identified an enhancement of comparability between similar-sized municipal bodies. It follows that it makes it more possible to exchange information between similar-sized LAs.

The results in Table 5-23 support Hypothesis 3. The regression R2 .752, is statistically significant at the level of 0.000. This supports the claim that control of information in structural collaborative procurement has a significant positive effect on collaborative benefits. Hypothesis 3 is recognised.

The findings of this quantitative study have contributed to the development of an SCP framework, which provides an approach to the procurement performance of LAs who are participating in structural collaborative arrangements. Besides, the six dimensions in quantitative research guide the three hypotheses.

Participants of collaborative arrangements are able to influence the performance of their value out of the structural collaboration. Factor analysis and, more predictably, regression analysis offer dimensions with variables that have a positive impact on the ability to enlarge resource sharing & business capabilities, to reduce procurement costs, to diminish the uncertainty of the procurement function, to reinforce the coordination mechanism to make JPGs more effective, to enlarge agility and flexibility in procurement functions, and to advance their control of information in collaboration. LAs who are participating, or are considering participating, cannot be naive regarding the functioning of their SCP because it has a direct effect on the procurement performance of their LA.

5.5 Summary

Chapter 5 has discussed the study's mixed findings in the context of the literature and the three research methods used herein. It has been structured using the three main research objectives, specified in sub-objectives and three hypotheses.

This study has used mixed methods and exploratory design Creswell and Clark (2011, pp. 214-222). The three main research objectives and sub-objectives have been weaved together, as discussed in the interpretation section Creswell and Clark (2011, pp. 66-67). Section three of this chapter built on the initial qualitative results and tested and discussed the generalised quantitative results that were synthesising between qualitative and quantitative analyses. This hybrid mixed research design covers the business research objectives of a practical proved concept for SCP in the Southeast Netherlands,

namely the real findings, which have been copied in several other regions in the Netherlands (Affairs, 2015) with their generalisability tested in this study.

The first section of the chapter discussed the three main research objectives and their translation to the SCP conceptual framework. The three overall research objectives were focused on values of SCP for individual LAs, uncertainty, and cost reduction through structural collaboration. Procurement performance for individual LAs has been allocated in potential efficiency and effectively areas of the procurement function. The model of van Van Weele (2006) has been extended with an accelerator, either positive or negative, affecting structural collaboration and structural collaborative benefits. The relationship between the conceptual framework and his model shows a distinction between efficient organisation of collaborative procurement, effectiveness, what can be influenced through structural collaboration.

Furthermore, procurement performance has been elaborated upon in value aspects, uncertainty issues and costs reduction features. In addition, value has been deepened further from what emerged from the existing literature and the practical existing understanding of procurement performance in the public setting.

The second part of the chapter considered nine value items, namely knowledge, professionalism, reputation, product development/innovation, complementary resources, quality of service, information asymmetry, cost-competitiveness and economies of scale and their impact on structural collaboration. Unpacking and analysing the component value in the context of this study represents the first examination of the value construct as it pertains to LAs in SCP, particularly the additional importance of lower transaction costs (Tella & Virolainen, 2005). In this research, economies of scale mean more than cost saving; this has been aggregated in resource sharing, product development, reputation quality of services, information symmetry and professionalism, which articulated the importance of collaboration in terms of ensuring that the structural setting (Meehan et al., 2016) of the cooperation is focussed on gaining performance for the member LAs.

The three-dimensional exchange of knowledge between SCP, LAs and LAs reciprocally is a new phenomenon in a collaborative setting. This contrasts with the private sector

where mutual competition restricts the sharing of knowledge and experiences (Dorger, 1999). In the national public sector, sharing of knowledge has been limited to overall collaborative arrangements, whereby there is tunnel vision focused on the least possible connection between participants (Meehan et al., 2016).

Strategic and tactical professionalism and business approaches to procurement (White et al., 2016) have been directly influenced by the attitude towards business processes in LAs. The reputation of SCP, which gains legitimacy, is added through experiences – not just individual experiences but across the regional setting of the SCP and the consistent branding throughout regional LAs. Experiences built on buying power and transparency & accountability in procurement processes add to SCPs' positive reputations, independently of formal institutions (Ingold & Leifeld, 2014).

Another value item recognised for LAs was product development/innovation. In contrast with Meehan et al. (2016), product development/innovation processes at SCP take place in a voluntary and equal environment among dedicated LAs with a strong professional core of operational staff. LAs reinforce each other regarding new business or social issues decentralised from the central government. SCP guides LAs and entrepreneurs, resulting in new business product concepts (Rolfstam et al., 2011 al). Secure critical resources on behalf of LAs have been recognised as complementary resources through the lens of RBT. Complementary value resources have overlapping features with knowledge and capacity resources but also concern cost reduction by sharing IT procurement systems, as evidenced in the quantitative study as well as in the case study.

Improving the quality of the procurement service has been identified as an enabler to extend the service of the SCP further than merely traditional execution of procurement procedures. More high-level applicable techniques in primary business line processes are demanded, which answers to the final product and services or policy of the councils.

Greater information symmetry can be mentioned as a value, which also affects costs by not organising it efficiently. Fragmentation or overlapping of execution of procurement tasks between agencies of LAs causes limitations in terms of the benefits of the learning curve. Similarly, participation in JPGs has been identified as being aimed at saving

costs. However, other researchers found that small LAs are not particularly cost competitive (Allers & Van Ommeren, 2016; Van de Laar, 2010).

The explanation why SCP influences value in internal business processes for LAs has been studied through the lens of the principles of RBT and TCT. This research shows that the interests between LAs and SCP are in line with each other, as joint ownership, which has a positive effect. Bounded rationality is a reality in the public sector that restricts the procurement manoeuvring space and is characteristic of the public sector and requires coordination. This coordination does not just happen because mayors say that it should. It means creating the right kind of framework (Challis et al., 1988). Furthermore, a symmetry of information, transparency of information and goal synchronisation are characteristics outside the borders of the RBT and TCT and have an influence on the performance of collaboration, which has a direct impact on its value for the business processes for the LAs.

The uncertainty of the procurement function has been recognised as a business risk for small and medium LAs. SCP is a procurement concept, which restricts those bounds and contributes to continuity in the procurement business processes of those organisations. Aspects such as diminishing resource dependency, symmetry of procurement information, sharing demands and legitimacy caused by reputation are a source of power multiplied by the SCP.

Besides the proliferation of values for primary business processes and the reduction of procurement business risks, what is interesting about this discussion chapter is the progressive variable of cost-savings to be achieved through JPGs (Nollet & Beaulieu, 2003, 2005; Schotanus et al., 2010). This is in connection with the critical remarks of the structural and segmented approach to prevent ineffectiveness and inefficiency, particularly in the pre-phase of the procurement process.

This chapter has provided a more accurate and comprehensive definition of structural procurement collaboration with both economic and managerial focuses. The quantitative phase – section three of this chapter – identified a set of seven interconnecting dimensions that make up effective structural procurement collaboration:

Resource sharing & Business capabilities, cost reduction, uncertainty, coordination mechanism, agility & flexibility and control information.

Regional agreements about procurement and policy goals between LAs, and guidelines for executing JPGs, have been noticed as a coordination mechanism to ensure the benefits of structural collaboration. Sharing resources/business capabilities, diminishing procurement costs, extending agility/flexibility and reducing uncertainty have been recognised as enablers of procurement performance for LAs. The degree of enablers depends on the size of the LAs involved. To gain extra performance at LAs, the control of information by management mechanism has been recognised as a key item. The three hypotheses discussed above have been tested through regression analysis and recognised, with minor intensification.

Now that both the quantitative and qualitative findings have been discussed in the context of literature, appropriate conclusions from this research will be drawn in the following chapter.

Chapter 6. Conclusion

6.1 Introduction

The conclusion of this thesis presents an evaluation of the backdrop, objectives and research process of the study. This final chapter provides an overview of the findings from the research objectives and engages the reader in the conceptualisation process regarding what the evidence shows. In addition, this section briefly recaps the research process, and makes recommendations for future research.

Collaborative arrangements have been recognised as one of the magic solutions to achieve individual goals rather than operating individually (Hill & Lynn, 2003). This is because LAs have to deal with new responsibilities, which are decentralised to local governments, and can be criticised for a lack of political power and professional business organisation (Dijkhoff, 2014). This drives the public debate about amalgamation and the right size of municipalities and LAs (Allers & Van Ommeren, 2016). The general opportunistic thought of organisations – "mass is cash" – is more complicated and not a one-size-fits-all solution for managing new demand issues and public developments. Therefore, it is of vital importance that more sophistication is needed to promote the usefulness and foresight of collaborative actions (Allers & Van Ommeren, 2016; Meehan et al., 2016; Pazirandeh & Herlin, 2014). In this section, a reflection on the research objectives of this thesis will be presented.

This study aimed to identify fundamental factors that influence purchasing performance at Dutch local authorities through structural cooperation in their region, hence the contribution to the current collaborative public procurement research stream is twofold. This research has sought to address two gaps identified in the literature: (1) insufficient research on factors of *structural* collaborative procurement driving the efficiency and effectively of LAs and (2) presenting the implications of value, costs reduction and uncertainty for the LAs.

The aims of this chapter are to address the research objectives, to outline the new contributions to science, methods, practice and finally to suggest opportunities for new research ideas in the future.

6.2 Achieving the Research Aim and Objectives

Collaborative public procurement concentrated on the concept of horizontal procurement partnership between equivalent and regional local authorities (Murray et al., 2008). Sharper insights after the first examinations suggested that structural collaboration significantly added efficiency and effectiveness to business processes and value to LAs' procurement functions. In terms of knowledge exchange, professionalism, reputation, product development/innovation, complementary resources, quality of services, information symmetry, cost-competitiveness and economies of scale, 'value' has been recognised as being more comprehensive than cost-competitiveness (Karjalainen, 2011). All of this contributed to a deeper and more meaningful understanding of the increased procurement performance of individual LAs through SCP. The research is outlined by three research objectives:

Research Objective I: To what extent does collaboration lead to more value in the internal business processes of the procurement function?
Research Objective II: To what extent does collaboration lead to less uncertainty in the procurement function?
Research Objective III: To what extent does collaboration lead to cost reduction in the procurement function?

6.2.1 Objective: To what extent does structural collaboration lead to more value in the internal business processes of the procurement function?

This first research objective addressed the relationship between structural collaboration and improvements in procurement processes, better supplier management and (technological) innovation. Overall, the evidence from this study found that structural collaboration improved the procurement process and function of LAs. The variables of resource sharing & business capabilities, agility and flexibility are significantly related (with near zero correlation and factor analysis) in value internal business processes of the procurement function.

The first quantitative factor supported sharing knowledge, resources, and capabilities. Participants in this study identified factors such as access to professional procurement experts, access to procurement legal experts, application of cross-functional procurement teams, more standardisation in procurement services, harmonisation of one IT procurement system, being less dependent on external procurement experts, sharing material-technical knowledge, and pooling knowledge as the benefits that their LA enjoyed through their collaborative procurement organisation, which increased the effectiveness and efficiency of their procurement performance. Also, access to cross-organisational design and improvement teams was stated as a valuable service of SCP. Similarly, the value of SCP was noted by applying innovative and technological development demands in procurement procedures. Furthermore, the request for critical/special procurement expertise and resources was accepted as a value provided by SCP. This left LAs more able to focus on their core business activities and adding value to product development and innovation. Uniformity in the procurement processes was acknowledged as a contribution of SCP. Indirectly, civil servants had been inspired by their adopted professional skills, such as the business attitude and processes of the SCP procedures and extended previous literature of Murray et al. (2008). Furthermore, SCP contributes to the value item professionalism, that civil servants are 'daily trained by practicing' had been generalised by these variables. Consequently in line with study of Proulx et al. (2014).

Another aspect of identified value was agility and flexibility. Both the interviews and the survey mentioned the vulnerability in business processes of procurement functions for small and medium LAs without SCP. A need for access to faster innovation products and services and agility in access to resources was approved. Agility and flexibility are important indicators of certainty in procurement business functions; on that basis, cycle times were generalised in innovative demands and in procurement processes overall. Organisational procurement risks can be positively influenced by outsourcing procurement function through SCP. This qualitative finding was generalised in the quantitative analysis for these variables. Innovation in business processes was also recognised as an improvements in the supply chains of LAs.

Besides this, additional quantitative analysis reinforced the availability of procurement experts and sharing of knowledge and experiences, as a contribution of the SCP.

Hypothesis II, examined if (and which) *the collaborative benefits have a significant positive effect on the procurement performance of the individual local government organisations*. The dimensions Resource Sharing/Business Capabilities, Agility and Flexibility, reveal these new directions in this area. It becomes clear that the input from procurement expertise and having faster access to innovative products and services with more agility and flexibility, all create value in the business processes of the LAs. These stated values reinforce the professionalism of their procurement function and make it possible to meet the policy objectives and decentralised tasks of the national government and the European council.

6.2.2 Objective: To what extent does structural collaboration lead to less uncertainty in the procurement function?

Research objective two addressed the relationship between the influence of an SCP and the robustness of the procurement function in the LA. One key aspect in reducing uncertainty was the control of information. In the interviews, the importance of annual joint procurement plans was mentioned. Also, regarding the strategic level, CEOs had been analysing overlapping financial processes in their public collaborative organisations, with the objective of streamlining joint financial management activities. The annual operating procurement plans of the LAs are elaborations of this task and directly linked by the impact on the financial budgets. Thus, this awareness of the essentially of this exercise and the jointly procurement plans had been significantly perceived. The quantitative generalising research confirmed this amongst the other SCPs in the Netherlands that were studied. Jointly conducting and periodically implementing amendments to the annual procurement plan had been recognised for ensuring the objectives of the individual LAs and applying effectiveness and efficiency in JPGs' procurement activities. The transparency of procurement plans between internal stakeholders and external suppliers had been recognised to improve effectiveness and efficiency.

Two direction hypotheses strengthened these findings. Hypothesis I examined if *structural collaboration had a positive effect on the collaborative benefit*. The outcomes narrowed the positive direction that joint agreements have concerning guidelines in SCPs, concerning executing JPG's. Hypothesis III examined if *Coordination between structural collaborative procurement and individual local government organisations*

moderates the procurement performance of local government organisations. This approves that coordination between the SCP and the individual local government organisation affects the degree of procurement performance of LAs. The confirmation that was made out of this is that, preparation and establishing of annual joint procurement plans through the participants and jointly deciding about exceptions of those plans, effects the contributions of the collaboration for finally the principal, LAs.

Overall, the qualitative phase showed that structural collaborative arrangements gave LAs access to procurement professionals and made them less dependent on critical resources. This has been generalised in the quantitative phase. The qualitative findings stated LAs became less vulnerable by accessing the procurement resources of SCP as it reduced the continuity risks arising from their own in-house procurement functions. This finding was confirmed in the quantitative analysis within the dimension Resource sharing & Business capabilities. Besides the internal aspect mentioned, vulnerability had been acknowledged in the quantitative analysis variable less dependence and monopolistic suppliers through LAs having more influence on procurement conditions though SCP and therefore having better access to alternative procurement specifications. Consolidated aggregation of demands has led to balanced relationships whereby LAs are less dependent on monopolised and oligopolistic suppliers. This was confirmed in both the qualitative and quantitative studies. The limited qualitative endorsement that procurement processes are more controlled by the ‘four eyes principle’ is remarkable. On the other hand, the quantitative tests argued for additional control of information in the tender processes and more transparency in procurement processes executed through SCP. Both analyses reinforced the contribution of SCP to the information symmetry theme. Legitimacy and reputation were mentioned qualitatively as significant forces for effective collaboration across the region. SCPs had been used to guarantee the internal and external accountability of the individual LAs. Mayors and CEO also used the brand of the regional SCP in common political issues where procurement was involved. The quantitative part of the research generalised these qualitative findings, with the qualitative analysis showing that SCP reinforces legitimacy and reputation in the region on a political and strategic level. This study explains the influence of structure in the collaboration model, from two understandings: for an effective and efficient collaboration process between the participants and less

dependence on the individual internal organisation of the LAs for external procurement resources.

6.2.3 Objective: To what extent does collaboration lead to cost reduction in the procurement function?

The qualitative interviews presented clear evidence that LAs outsourcing their procurement function through SCP realise internal cost reductions. This has also been shown in the case study for JPGs and IT procurement systems. The learning curve demonstrated the diminishing of days spent on procurement in the learning concept. Complementary quantitative research revealed a significant relationship (with near zero correlation and factor analysis) between cost reduction and outsourcing procurement functions through structural collaboration. Variables linked to the themes such as procurement management costs, standardisation, transaction costs and external consultancy costs are significantly related to influencing the procurement performance of LAs through SCP. On the other hand, goal synchronisation and joint commitment were significantly related to coordination mechanism, which influenced the degree of cost reduction.

In relation to procurement costs, the management costs during the execution of procurement projects and contract management had been acknowledged as cost component, which can be reduced by SCP. Standardisation during the procurement processes similarly leads to savings. Procurement IT costs, which could be saved by standardisation through the SCP, had been noticed. Contract management had additionally been recognised as a cost reduction variable. Also, lower external procurement consultancy costs had been realised through effective resources; procurement business and legal procurement of the SCP. In the qualitative phase, the interviewees were unanimously convinced that cost reduction was gained by standardisation, fewer transactions, synergies in procurement management costs, and lower external costs. These perceptions have been generalised in the variables of the quantitative phase. Besides this, cost savings for the standardisation of IT procurement systems had been analysed, and financial benefits had been calculated in the case study. Moreover, comparative analyses of 8 cases showed that the internal procurement costs for JPGs are lower compared with individual procurement and vary from 38.71 – 75.62%. Although economies of scale in JPG were optimal for cost components

communication and procurement strategy and had an increasing proportional character, suggested caused beside the procurement features, the complexity of the product/services, and synchronisation of the procurement objectives among the participated LAs. The perception that outsourcing procurement functions to SCPs would lead to cost reduction had been generalised in the quantitative study but this was mentioned at first or linked to by all of the interviewees. Both studies recognised the diminishing costs of no longer using external consultancy, procurement and legal experts for their LAs. The general perception of cost-competitiveness, procurement resources for lowest cost for small/medium LAs', was confirmed in both studies.

Another aspect of cost reduction identified was coordination mechanism. In interviews the importance of jointly conducting the annual procurement plan as a primary coordination mechanism had been mentioned. Out of the analyses of the case study was mentioned the dissimilarity in procurement policies among the LAs, which malfunctioned the effectiveness and moreover the efficiency during the execution of the JPG's. Similarly in the qualitative phase sluggish processes in JPGs', what caused vulnerability in collaborative processes had also been remarked on. Generally the critical of coordination mechanism, for effective and efficient collaboration had been acknowledged. Harmonisation and joint agreements concerning procurement policies and an unambiguous, with committed, guideline for the execution of the JPGs had been quantitatively generalised for an effective and efficient SCP.

Hypothesis I examined if *structural collaboration had a positive effect on the collaborative benefit*. The outcomes narrowed the positive contribution that joint agreements have concerning procurement goals and strategies.

Having recapitulated the content and rationale of the thesis, the theoretical, methodological and managerial suggestions of this research, its limitations, and opportunities for additional future research can now be considered.

6.2.4 Research process

From position of a 'reflective partner', the potential improvement of the procurement function of LAs through SCP has been researched. The central view of reality in this research was overshadowed by the explanation of the research objectives observed

through the TCT and RBT. A worldview based on post-positivism was worked from the theory into the research objectives, interviews and hypotheses, combining deductive and inductive thinking and mixing both qualitative and quantitative research methods (Marsh & Stoker, 2002, p. 25). Originally the plan of the author was to take a positivist approach, but as a result of reflecting further on the research objectives, different research paradigms have emerged. This has been amended a little to explore qualitative data further in the case study. Therefore a post-positivist approach has been applied with generalisation of the SCP theory/concept.

Conceptualising the evidence

In this research, values have been identified, which can influence or improve the procurement performance of an individual LA through collaborative procurement. The conceptualisation of this achievement, which guided the research approach, can be seen in the framework below in Figure 6-1. Consequently a conceptual framework has been derived from the extant literature discussed in Chapter 2 and has been provided to collect the data.

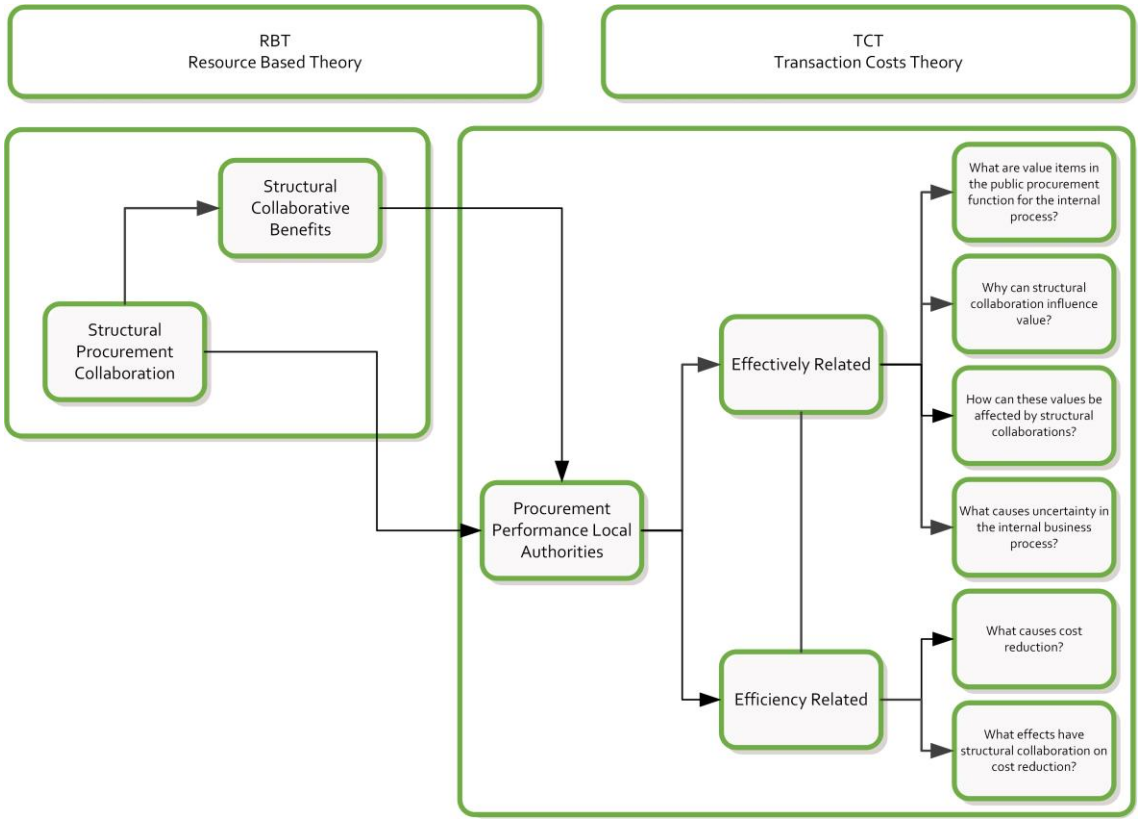


Figure 6-1 Conceptualising of the Empirical Research

The literature review in Chapter 2 identified the items that influence the power of SCP regarding the procurement performance of individual LAs. These items were derived from existing theories. In Figure 6-1, the process of generalisation of the quantitative findings, originated by the qualitative findings, was transformed in the operation model from Chapter 2.

Method and variables

Business research projects constitute systematic leaning about the real findings of phenomena in this subject area (Bryman, 2016b, pp. 65-70). The in-depth, semi-structured interviews conducted with CEOs, a mayor, CFOs and CPOs from LAs provide rich information to reveal real enablers underpinned by theories and focused on the perspective of the end users of the SCP – the LAs. These qualitative statements enriched the basis for measuring other SCPs in the Netherlands. The interviewees were also involved in the development of the questionnaire, as experts, whereby more comprehensive closed answers were generated and the operation scheme was refined.

Through comparing and interpreting the qualitative and quantitative analysis, it was seen where the findings converged, diverged or were related. Because of the homogeneity of features of this target group, it was decided to follow up the qualitative findings with quantitative research, which allowed the scope and generalisability of the qualitative findings to be measured. Consequently, the qualitative data collection of this study was deemed suitable as an initial exploratory approach in addition to the hard evidence from the document analysis.

6.2.5 Evaluation of the literature findings

From a post-positivism view, composing theory and practice (Karatas-Ozkan, Anderson, Fayolle, Howells, & Condor, 2014) and focusing on the three research objectives, the key concepts were (collaborative) procurement performance, shared service centre (SSC), joint purchase group, value, outsourcing, procurement costs and uncertainty. The purpose of the literature review was to critically evaluate each of these key concepts and establish clear explanations between them. A summary of the three research objectives and the theoretical approach is provided below.

To what extent does structural collaboration lead to more value in the internal business processes of the procurement function (RO1)?

The current literature on the value of SSCs, centralised and collaborative procurement, has concluded that creating a better performance of the procurement function is influenced via economies of scale, knowledge extending, professionalism, reputation, access to product development, complementary resources, quality of services, improveness of information asymmetry and cost-competitiveness.

In contrast, these values have been examined to a limited extent in the structural collaborations with local authorities. Generally, the academic literature is mainly focused on JPGs, with less attention paid to structural coordination. The SSC concept is somewhat in line with this. Unfortunately, the procurement function is underrepresented in SSC research. Research into collaborative JPGs has shown values, exclusive to the concerned JPG, limited to the corporate procurement function in the long term, and with a limited direct connection with the strategic objectives of the organisation.

Potential gaps for this study, concerning SCPs in the Netherlands, were:

- *Economies of scale:* capacity, scale advantages on IT, learning, and execution;
- *Knowledge:* awareness of cohesive collaboration between multi-discipline procurement teams and fragmented potentially deviating perceptions between product domains;
- *Professionalism:* empowering and continuity of the availability of professionalism at the LAs as a result of SCP and potential transfer of professionalism to civil servants from SCP experts;
- *Reputation:* the influence of regional inter-collegial links at mayor level and the influence of the activities of the SCP and their effects on the reputation of LAs;
- *Product development:* improvements of processes and structures in service concepts;
- *Complementary resources:* the effects of SCPs on the access of SMEs to public tenders and the standardisation and uniformity of the procurement processes;
- *Information asymmetry:* the effect of SCPs on information asymmetry;
- *Cost-competitiveness:* attention to cost-competitiveness as a driver.

To what extent does structural collaboration lead to less uncertainty in the procurement function (RO2)?

Uncertainty has been recognised in the literature and drives demand for structural integrating of the procurement units in the LAs. Outstanding research has showed the contribution of SSC in the field of IT, finance, and human resource management regarding the continuity of these supporting services. Also the case study by Murray et al. (2008)in the UK, directly supports this research objective.

To what extent does structural collaboration lead to cost reduction in the procurement function(RO3)?

Various literature on research executed in the private and public sectors has shown cost reduction in JPGs. To a lesser extent, attention has been given to scale and saving opportunities in procurement expertise capabilities via structural collaboration. The following gaps have been recognised in the literature review of this research:

- calculation of the learning curve in the execution of procurement procedures;
- variance calculation between JPG and individual procurement projects in an SCP environment;
- internal absorption costs: variance between up-scaling internal costs by merging and SCP;
- fundamental research on procurement IT savings in an SCP environment;
- research on lower external procurement consultancy costs;
- research on lower external procurement legal consultancy costs;
- research on lower management costs for the procurement function.

The previous literature in this field gives an overview of collaborative procurement in structural, voluntary and involuntary arrangements. Excellent literature is focused on purchasing groups and researched through case studies and interviews where cost reduction and added value have been assumed but calculated limitaly.

To a lesser extent have been focused on SCP, limited in exploratory method and non in the Netherlands. Academic science is acquainted with the characteristics of collaborative procurement but its direct structural influence on the performance of procurement functions of LAs was as yet less known.

Theoretical lens

Underpinning this examination, two theories have been explored in Chapter II. What contributions do the theories make to the requested research objectives? The review of the literature in Chapter 2 suggested that the determinants of the enablers of collaborative procurement have been well thought-out from a wide range of academic perspectives. LAs are putting more and more resources into their business organisations in exchange to providing more outputs and more outcomes.

A striking potential benefit is the contribution to cost-competitiveness through outsourcing business activities. Another interpretation of this is that economic benefits – like the synergy effects identified in the literature – can be spread out in complementary business activities through knowledge and experience, as in the operational phase (Bals & Turkulainen, 2017). Additionally, the TCT and RBT have been identified as influential theories, with recurrent explanations in social life, respectively business-economic phenomena alongside cost-competitive characteristics. Regarding TCT, this research enfolds the ontological assumption, namely contract design of the transaction relation between the actors, LAs and SCP. It suggests that asymmetry of information and goal synchronisation can create ineffectiveness and inefficiency in the operation of LAs' procurement (transaction) processes. Through the lens of the TCT, specifically with regard to the characteristics of the business activities of LAs, costs arise among other things as the quantity of buying on the market and cost of using markets (Coase, 1937). These cost structure elements have been identified makings approximately the extent of JPGs, characteristics organisations, governance and alternative collaboration structures.

However, the resource-based view enlightens the importance of resources such as procurement consultancy capabilities; procurement organisational processes; public procurement attributes; information; knowledge that is controlled by LAs and that enable and implement strategies to improve their efficiency and effectiveness. RBT helps in recognising the influence of collaboration on the outcomes of the procurement function.

Otherwise, RBT had been interpreted as less robust and more volatile. Therefore, the interpretation was made to explore the potential extending of the RBT besides

knowledge with capabilities, and the establishing of the governance in the collaboration suggested support of this strategic theory in this research (Richter & Brühl, 2017).

The core assumption of the RBT is that actors such as LAs who do not have a 'constant flow of resources' must enter into relationships with others in order to obtain these resources. This makes actors, here referring to LAs, dependent on each other and probably can be also supported by the resource dependency theory (Pfeffer & Salancik, 1978). Here the actors are looking for equal types of resources. However, this could also be taken, as the likelihood of willingness to engage in intensive cooperation will be greatest in this relationship. Alternatively, it could be a way to secure the uncertainty of business procurement processes regarding internal aspects. Viewing from the RBT to the external aspects, sharing market information and consolidation of demands had been identified, to use buying power (Herlin & Pazirandeh, 2012), to be less dependent on dominance in monopolistic or oligopolistic suppliers markets. In Table 6-1, the two supporting theories are presented.

Table 6-1 Underpinning Theories of this Study

Theory	Description	Author
TCT (Transaction Costs Theory)	Optimisation of the procurement process via specialisation, information and know-how sharing, investments in (mainly IT) infrastructures (e-procurement tools)	(Coase, 1937) (Albano & Sparro, 2010) (Williamson, 1985)
RBT (Resource-Based Theory)	An organisation's requirement for a sustained competitive advantage, based on analysis of which elements an organisation need to deliver their output. "Tangible and intangible resources, as well as the capabilities required to deploy firm assets".	Warnier et al. (2013) Smith et al. (1996)

For the control of the collaborative procurement function, supported by the RBT and TCT, the literature viewed the links between the variable parameters and business goals as well as the synchronisation of procurement goals, collaborative procurement IT management systems, consistent agreements regarding the execution of procurement

projects (tactically and operationally) and at least an unambiguously collaborative governance model. More specifically, the study results also confirmed that certain types of collaborative mechanism are more suited to each other, as RBT and TCT suggest; for instance, procurement capacity, legitimacy and reputation, coordination mechanism, and control of information.

Richter & Brühl (2017) stated in their research that research into SSC was conducted to a lesser extent from the RBT perspective and not in a multi-point perspective with other theories; this also concerns TCT. This research has attempted to demonstrate a multi-perspective approach with both the TCT and RBT.

6.3 Practice Contributions

The bridge between the demands of academia and the requirements of business is best addressed through a professional UK doctorate (Sarros, Willis, & Palmer, 2005). In line with this, Murray (2011, pp. 50-52) stated "*the professional doctorate is usually focussed on improving practice within the profession that is the subject of the research*". Similar in this thesis, the connection between theory and practice has been made by modelling the collaborative concept of what affects the performance of business processes of LAs in the real world. The opportunities that municipalities have to professionalise their procurement function with an SCP can help LAs to fulfil the decentralisation challenge they are facing and will have a ripple effect on the Dutch Government, LAs in the Netherlands, LAs in Europe, and Dutch entrepreneurs.

6.3.1 Impact on the Dutch Government

It is noteworthy that, at the start of this journey in 2014, the pressure on the national and regional government was to amalgamate with adjacent small municipalities, merge with large municipalities or a combination of the two. The argument was mainly twofold: more governmental sustainable power at local level and more organisational power, with a better capacity to deal with the decentralisations and the latest social public developments. In the last five years there has been a decrease of 25 municipalities. On the other hand cooperations have been exceeded in the field of social healthcare, environment, IT, taxes, security, innovations, spatial planning and procurement.

The latest local elections, in 2018, confirmed these collaboration developments, through large victories for local political parties that are in favour of permanent denationalisation. Perhaps, improvement based on intermunicipal collaboration achieves fewer sustainable effects than improvement based on a large-scale municipal amalgamation. The reason for this lies in the fact that, if a disagreement occurs between the cooperating municipalities, services to citizens can come to a halt altogether or be delayed. Furthermore after merging, municipalities are more able to realise large-scale tasks, as strategic thinking power and the ability to make major strategic decisions is increased. On the other hand, SCP has limited political involvement, but is supplementary, connecting demand, LAs and companies (supply) and able to bring LAs into a position to realise decisive projects. Likewise, it can create entrance innovation out of the market into procurement projects, faster and in a professional way.

This study's contribution to practice is twofold: regional and central. In the South of the Netherlands, several studies have been conducted on the administrative power of the municipalities. The region of North-Brabant (PNB) and the Association of Municipalities Brabant (VNG) explore how to strengthen municipalities' clout in the future to face social challenges in the region. The effectiveness of a mean and lean organisation can contribute to a political board that would be able to address such social challenges in the most valuable way. The value can further be rephrased abstractly in terms of citizen satisfaction, and also be linked to general procurement objectives such as increased access for Small and Medium Enterprises (SMEs), increased sustainability, cost savings, or a combination of these factors.

It is hoped that the Dutch Government will recommend fragmented public organisations to build on the core strengths identified in this research, towards more structural and intense collaboration, through procurement via expert organisations. This research can bring the consideration on the political and management agenda.

The Ministry of Economic Affairs has started the national project 'Beter Aanbesteden' (Better Procurement Process), to improve the quality of procurement in practice. The reason for this was the evaluation of the Public Procurement Act 2012, carried out in 2015 (Parliamentary document 34 252, no. 1 and 2). That evaluation showed that the application of the procurement rules, both on the part of entrepreneurs and of

contracting authorities, could still be improved. Besides, the images of entrepreneurs on the one hand and contracting authorities on the other showed a clear difference in the perception of procurement practice. That is why ‘Beter Aanbesteden’ has opted for dialogue between both parties in order to bring those images, of problems and solutions, closer together. Through this national project, the Ministry has identified SCPs as a best practice alternative for public organisations and used them in the elaboration of the campaign.

The Dutch foundation for Procurement (Nevi), Dutch national procurement expertise centre (Pianoo) and Vereniging van Nederlandse Gemeenten (VNG) have indicated a great deal of interest in the results of this study. The researcher of this thesis has been consulted as an expert for Pianoo on the implementation of new SCPs. The VNG and the researcher of this thesis are exploring the possibilities of developing a national centre for JPGs, for routine commodities, in a joint venture with SCPs.

6.3.2 Impact on Dutch Local Authorities (LAs)

The results will be applicable to local organisations in the Netherlands and also to the region in the southeast of the Netherlands. The results of the research will also be applicable to other regions in the Netherlands, comparable with the 26 Joint Procurement Organisations for municipalities in the Netherlands, which are equivalents of the Bizob organisation. In an ideal situation, this cost-effectiveness should attract municipalities or LAs to an optimal way of collaboration, without forcing them. These two contributions provide a significant practical and theoretical application to knowledge in the field of collaboration in the public sector, especially local government. Whilst conducting the research, several LAs and regional SSC public organisations have shown interest in the SCP. Besides interest in the concept, participants in the research, from the interviews and survey, also indicated that they wanted to be kept informed of the findings and results. This research can bring the topic onto the political and management agenda. A short briefing paper will be developed highlighting the key findings and sent to all those who participated, as well as to relevant government officials and politicians.

The *economies of scale* advantage, by upscaling internal business procurement activities, can be an argument for merging organisations. On the other hand, this study

presented a practical and empirical alternative regarding internal procurement costs through fundamental cooperation between counterpart public organisations in the same region. Smart expenditure of joint procurement capacity can save money compared to insourcing procurement facilities, apart from quality, continuity and flexibility. This can be attractive for LAs in the same region and operating in the same business environment who are struggling with their procurement capacity or are making long-term strategic plans for 'outsourcing' their procurement capacity to the SCP based on financial and continuity concerns. Economies of scale is an obvious driver for starting an SCP or expanding an existing SCP; reduction in purchasing and capacity costs results in concrete and direct benefits.

In line with the economies of 'collaboration' for LAs, sharing and building *knowledge* through SCP can be a valuable opportunity for those LAs who endeavour to *professionalise* their procurement function. Continued skills and knowledge training and experienced public procurement are accessible via an SCP.

The internal *reputation* of the procurement function to the stakeholder and council mostly depends on an integer procurement function and an unqualified audit opinion from the financial auditor of the procurement function. This study suggested a positive influence through SCPs regarding the *reputation and legitimacy* of the procurement function for their internal stakeholders; this is reinforced by the statement of the 'board', councillors, mayors, aldermen, and town-managers, for an executive agenda for professionalism of the procurement function.

For LAs aspiring towards *innovation or product/services development* from the suppliers' market, this study suggested the power of collaboration for chasing up product development. These developments can meet the demands requested by citizens and help to address tasks imposed by the national government. Moreover looking at the enormous political agenda, after the local elections, 2018, mostly every LA has assigned the new municipality council to implement energy-neutral programmes, car-free housing areas, climate-friendly and waste-free action plans. SCPs, together with public regional agencies, are in the position to transfer these policy principles in the most appropriate procurement procedure. Besides that, by SCP more opportunities arise for strategical partnerships with suppliers, which effect more innovation and quality.

As implementing and continuing a professional procurement function is an activity that an LA cannot undertake on its own, the SCP concept framework extends procurement performance by identifying six dimensions: resources sharing and business capabilities; procurement costs; uncertainty; agility and flexibility; coordination mechanism; and control of information. These can contribute to secure business processes and achieve potential savings for LAs. The SCP concept benefits LAs which are interested in improving or measuring their procurement performance through structural collaboration. Empirically, it has been researched that *access* to procurement knowledge, sharing procurement knowledge and experiences and deployment of cross-organisation procurement teams by SCP affects the procurement performance of participating organisations. The *uncertainty* of the procurement business processes can be improved by less dependency on resources; less information asymmetry; demand sharing and aggregation; and increased legitimacy and reputation through SCP. *Coordination* between collaborating LAs is essential for an effective and efficient collaborative procurement organisation. Synchronisation of procurement objectives, regarding social policies; access for SMEs; green procurement; sustainability; and the size of demand are determined for effectiveness. In line with this dimension, *control of information*, joint commitment and agreement on annual procurement plans is essential for an effective structure. *Agility and flexibility* affect the effectiveness of procurement functions and can contribute to the interests of their members, which are for more and quicker access to innovative concepts and ideas out of the market, and shorter cycle time for the execution of the procurement procedures.

For years in the public sector, dealing responsibly with government money has been a key theme, and therefore efficiency in procurement functions has been part of the paradigm of this thesis regarding the contribution of collaboration. From that understanding, this thesis also presented practical and applicable financial arguments for engaging in collaborative arrangements. These financial motives include reducing transaction *procurement costs*; lowering management costs through ‘outsourcing’ the procurement function to SCP; lowering external consultancy costs; lowering procurement management costs; and lowering procurement IT costs. These perceived indicators provide arguments for councils and government officials to consider SCP as a stepping-stone for their public service organisation.

Certain results of this study had been discussed in the meantime with the VNG, who are very interested in the results and their role in the area of collaborative procurement. On a national level, the branch organisation of the municipalities, the VNG, could foster more interest in SCPs, possibly in cooperation with the national government and the Ministry of Economic Affairs. Also on a macro-national level, coordination between SCPs could provide exchanging experiences between those equal organisations. Similarly, national procurement initiatives for specifically purchasing commodities could then be considered, of which the critical success factors and pitfalls are highlighted by this thesis.

6.3.3 Impact on LAs in Europe

Alongside the international interest in SCP in the public sector, on a national level there has been a significant increase in the number of SCPs operating.

The European Commission directorate-general for Inter-Market, Industry Entrepreneurship and SMEs recently (20-09-2017) organised a business visit to investigate SCP Bizob, with the general objective of seeing whether the concept of collaborative procurement is applicable to other member states in the EU – a concept explored and explained in great detail in this thesis. The author of this research recently joined as a member of the Commission Stakeholder Expert Group on Public Procurement of the European Commission, Directorate-General for Internal Market, Industry Entrepreneurs and SMEs. The author intends to present the result of this study to this expert group.

6.3.4 Impact on Dutch entrepreneurs

This study recognised that in terms of *complementary* resources, the SCP can encourage the creation of an ‘entrance gate’ for SMEs to public tenders and the ‘domain’ of public procurement, improve standardisation and uniformity of procurement services, and support shared IT structures and training equipment. LAs as suppliers could also benefit from having less *asymmetry of information* between each other.

Branch organisations for the construction industry, SMEs, architects and IT have indicated that they find it less ambiguous when LAs jointly use standard tender

documents. They also find it more straightforward to discuss this regionally with one organisation, which also works directly for the LAs. On the other hand, abuse of dominant power must be prevented.

6.4 Academic Contributions

This DBA thesis systematically investigates the concept of structural collaborative procurement in the public sector using a number of theories. The research identified clear relationships between procurement performance and structural collaborations. Perceived results such as increased knowledge; increased capacity; cost reduction; reduced uncertainty and value for LAs demonstrate the benefits of collaboration. The research also identified the dimensions of goal synchronisation and coordination mechanism, which can have a negative influence on these benefits. Deeper understanding of 'what' the values and benefits of structural collaborative procurement are has been demonstrated in this research. It may be that LAs that are already participating in an SCP could increase their procurement performance by optimising the SCP influencers, and the study thus offers important contributions both theoretically and methodologically.

6.4.1 Theoretical contribution: Describing structural collaborative procurement (SCP)

Notwithstanding the prominence of topics such as collaboration, centralisation, and shared services for the public sector (Albano & Sparro, 2010; Kastanioti et al., 2013; Murray et al., 2008; Provan & Kenis, 2007; Richter & Brühl, 2017), limited research has considered collaborative procurement performance within a structural jointly insourced concept context within an existing region. The following sections describe the conceptual and theoretical contributions to existing collaborative public procurement knowledge that have arisen from the first examination of procurement performance such as its effects on the business processes of LAs in terms of value, uncertainty and procurement costs.

The *contribution to knowledge* of this research is fourfold. Firstly, this research provides structured systematic analysis of collaboration in the public sector and demonstrates a significant gap in the literature. Without a doubt, there is a scarcity of recent publications on this topic, and academic attention has been focused firstly on the

phenomenon of new tasks instead of smart ways to organise them. Previous literature has focused on volunteer purchase groups, initiated by procurement managers, and has put more attention on the direct and short-term gains of collaboration, which has probably motivated independent and fragmented organisations to act alone or use hybrid forms of collaboration. Besides these studies, there is more and more research in the area of shared service centres, often with the gains of collaborative procurement receiving a disappointingly superficial treatment. This research has added to the academic knowledge that structural organised collaboration, with a mix of central organised (knowledge) and decentralise (capacity) in the organisations, can bring sustainable revenues and financial benefits to a professional function. Quantitative study and the comparative cost analyses from the joint purchase groups supported the request of Murray et al. (2008) for more research into relative cost advantage through structural collaboration.

Secondly, this research provides new insights by applying a strategic and economic theory lens to collaboration in using the procurement dataset of fragmented local government organisations. Although the RBT had a great explanatory power for collaboration – especially for the objectives of value and less uncertainty – its approach identifies complementary resources and capabilities; it does not provide expert or management resources in relation to procurement. This study has extended the value of complementary resources by offering the first examination of LAs' structural procurement collaboration arrangements in the Netherlands and procurement performance. This revealed that the contribution LAs receive from SCP impacts a large scale of resources, such as management expertise, legal expertise, experts for collaborative projects, IT procurement systems and sustainable exchanging of technical expertise between the members of the SCP, concerning procurement. These wider contributions of the RBT multiplied the procurement professionalism of the participants in the SCP. Furthermore, in addition to the volatile availability of the RBT, this study demonstrated that SCP, endemic the robustness and sustainable availability of professional procurement resources.

Murray et al. (2008); Nollet and Beaulieu (2005); Walker et al. (2013) called for more evidence of the gains of structural collaborative procurement, having shown the value of significant cost synergies and standardisation of tactical and operational procurement processes themselves. The TCT had an excessive explanatory influence on the research

objective of cost reduction. However, in this study the TCT identified the assessment of cost reduction as wider than transactions only between entrepreneurs and clients. Transaction costs have extended in the procurement costs within JPGs, collaborative IT e-procurement systems, and in the costs for procurement and legal experts. Furthermore, from the direction of LA and SCP, this study has shown the value of harmonisation of procurement policies and objectives, and conducting joint procurement plans, which has an effect on cost reduction and effectiveness in the operation of collaboration.

Thirdly, a significant contribution has been made in a departure from the previous research by providing more insights into the cost reductions:

- The collaborative procurement cost comparative analysis was beneficial when contrasted with the interviews.
- The calculation of the learning curve showed applicability of the learning concept in executing procurement procedures.
- Organisation costs and variance between upscaling and structural collaboration were investigated.
- Joint use of procurement IT-system for conducting individual and collaborative tenders enabled cost reductions.

A fourth, final significant contribution is made through deeper study notice of the coordination and control of information between SCP and LAs by examining the efficiency and effectiveness. The study has shown that more control of information through the execution of annual individual procurement plans and the consolidation of individual plans into a consolidated JPG, and the harmonisation of procurement policy and goals, affect the efficiency and effectivity of the collaboration.

6.4.2 Theoretical contribution: Procurement performance framework for SCP

One of the contributions that this thesis makes is the creation of a procurement performance conceptual framework for SCPs, which provides themes, dimensions and variables. These have been informed by theoretical and empirical considerations that affect the procurement performance of individual LAs participating in structural collaborative arrangements.

The study offers an SCP conceptual procurement performance framework, which represents this thesis' re-conceptualisation of the procurement performance of LAs. This is considered an original contribution to knowledge because it is a significant original contribution that has emerged from small gaps within the comprehensive research of Murray et al. (2008) and provides a novel interpretation of this current problem in the Netherlands. It is reinforced by its primarily original approach and focused through the lens of two complementary theories, RBT (strategic) and TCT (economical) (Richter & Brühl, 2017).

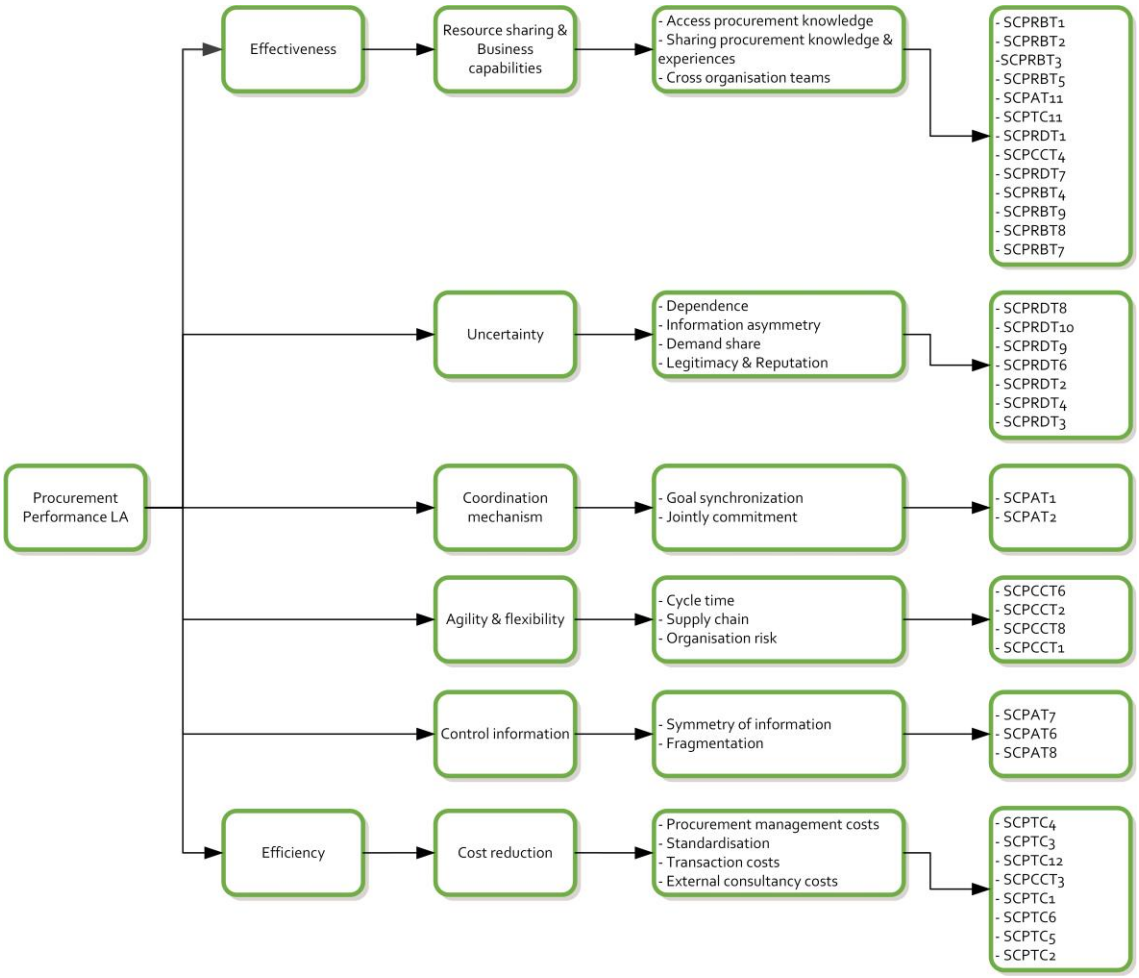


Figure 6-2 SCP Conceptual Framework

These theories consider the fundamental power of sources, which affects the output of the collaboration. This is the first study to have identified hidden dimensions for effective and efficient structural collaborative public procurement and established them empirically. This conceptual framework, in Figure 6-2, meets a demand and a gap in the

literature of Janssen and Joha (2008) for empirical exploration of the benefits, issues and business uncertainties of SCPs.

6.4.3 Theoretical contribution: Value items in the internal processes

Research by Murray et al. (2008) requested for further research to explore the benefits of in-house collaborative arrangements between LAs. This study makes a contribution towards achieving a more concrete understanding of the value of SCPs for individual LAs by presenting an examination of value items in the public procurement function for internal processes such as knowledge; professionalism; reputation; product development/innovation; complementary resources; quality of services, information asymmetry; cost-competitiveness and economies of scale.

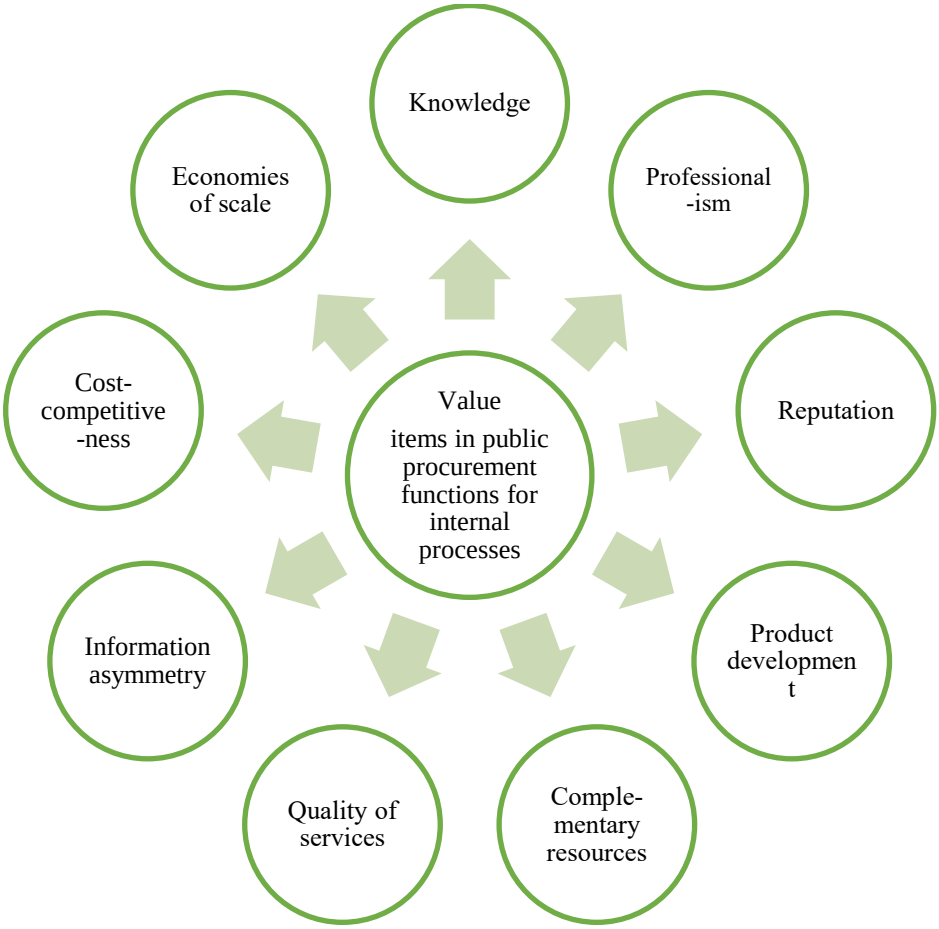


Figure 6-3 SCP value items

These nine items, which support the value of the SCP for LAs, are shown in Figure 6-3. They help understanding what the values and contributions of SCP are for LAs' procurement functions, which previous research neglected.

6.4.4 Methodological Contribution

The first methodological contribution and unique aspect of this study is that it captures data for LAs, especially municipalities in the Netherlands, that had previously not been applied to SCP in the public sector. The design of the methodology of the primary investigative instrument – a semi-structured interview – and the case study provided strong support for the use indicators to influence procurement performance in the public sector through SCP. Exclusively with exploratory design, which was comprised of consecutive qualitative and quantitative strand to illustrate the quantitative findings. Collaborative procurement and the measurement of procurement performance for LAs is predominantly prepossessed by interpretivists in single or multi-case studies and general statistics measuring models. In line with Hesse-Biber (2015) and Van Weele (2007), who argued for more mixed studies that build on each other rather than contrast with each other, this study used an exploratory approach to reinforce its separate researches and to triangulate the results. Also, in line with Murray (2009), who commented that their "*findings were not triangulated with those of other actors, for example, politicians, and there may therefore be questions of validity*", in this study, primary data from public sector sources (pre-selected key respondents from the areas of strategic management and politics) was used alongside triangulation.

The second methodological contribution of this research is the validation and application of SCP conceptual framework as well as the 'value items'. The SCP model represents a significant step forwards in the development of a measurement of the performance of structural collaboration for LAs and the value items provide insight in the impact of SCP for LAs. The combination of semi-structured, in-depth interviews and a questionnaire gave a comprehensible view of experts' perceptions, experiences and responses regarding how organised SCP performs for LAs. The complementary research of the case study made the findings more applicable and accurate. The concurrent use of these three techniques enriched the primary data and triangulated it. Firstly, the semi-structured, in-depth interviews with CEOs, a mayor, and CPOs provided in-depth, strategic and managerial insights into the dimensions that affect procurement performance in the business processes of LAs through structural collaborations. Secondly, these findings refined the operational scheme and the variables versus questionnaire, connecting the quantitative strand to the initial qualitative strand. The questionnaire used in this study was initially tested using a pilot

study in order to check its suitability and make sure it was not over-specialised for the procurement voice in a public management context. Thirdly, the additional initial calculations and analyses from the case study regarding procurement cost reductions vs. the individual-collaborative approach provide deep fundamental evidence and insight into currently unknown areas. Before testing the hypotheses, the qualitative and quantitative data were assessed side-by-side, fortified by triangulation and explanation.

The final contribution this study makes is the application of a mixed-methodology design. The applied mixed studies method had been considered as a contribution to the previous solo qualitative and quantitative approaches, besides the explorative character of this mixed study, followed by the generalised quantitative study. Therefore, the mixed research approach of this thesis have lead to a fuller and deeper understanding of the reality of LAs in terms of structural collaboration and procurement performance. Not only an understanding of the size of differences, but contributed knowledge of the different power of sources which leads to the degree of performance and how these function. This study presents the first mixed methods of analysis of the procurement performances of LAs and structural collaboration in the Netherlands.

6.5 Limitations of this Study

While the research has made significant contributions to science and practice, all research is subject to limitations and boundaries, which must be acknowledged (Collis & Hussey, 2014, pp. 110-111). The potential limitations of this research will be discussed in terms of those that are concerned with the research methodology and related to the SCP conceptual framework. The context of this research – local authorities in the Netherlands – started at local level with LAs that are members of SCP and those that are not. The second phase of this study has been executed at the national level, with existing SCPs as the research population. LAs consisted of municipalities and affiliated public organisations, like safety organisations.

The population sample of the interviews (n=9) were thoughtfully selected and included in the expert-review group for the questionnaire. The exploratory mixed study approach provided an enormous volume of data, which allowed the researcher to argument the varying research objectives (Creswell & Clark, 2011, pp. 1-18). The post-positivism approach enriched understanding of the phenomena of this study, which provided

satisfactory answers about the SCP theory/concept and reinforced the systematic empirical test.

The quantitative measurement model had 57 items covering 51 variables. This was quite large compared to other investigations' questionnaires. However, a good response rate of 73.5% was achieved.

The respondents included pre-selected public (procurement) managers (directors and managers). In the semi-structured in-depth interviews, a mix of politicians (mayor), CEOs and managers were included. There may be significant differences in relationship perceptions between mayor, CEO and managers and directors. The number of observations (112) was absolutely limited, but relatively not and not restricted for the reliability and validity. Also the statistics tests conducted (Skewness and Kurtosis analysis; scale consistency; Cronbach's Alpha; correlation and regression), which were successfully tested and approved, showed that communalities are high and thus sample size is of minor importance (Treiblmaier & Filzmoser, 2010).

This case study was conducted to gain answers for underlying questions; these results cannot be used for generalising as the results depend on the individual performance of the SCP. These can be further extended and are interesting for benchmarking purposes, provided they are executed with an appropriate procedure (Yin, 2013).

This research was conducted in the Netherlands, particularly in local government, at a particular point in time (2014-2018) when many responsibilities were being devolved to LAs. It is unclear if these results would be generalisable to other countries.

6.6 Future Research Directions

Coordination of regional collaborations

Areas that have not received attention, which can be considered interesting for the success of structural collaboration arrangements, is leadership and governance. With the protection of the back office, integrated in the public official process, procurement can afford to do their best and try to do their best. Mayors, aldermen, councillors and town-managers in the boardroom expect the SCP to realise the instructed goals and targets. Interesting areas of leadership can be the essence and the scope of the SCP, cooperation

with the primary business activities, changes and improvements, how to manage the links between the boardrooms of the LAs and other regional collaborative arrangements. Another intriguing area is the management of expectations guiding the LAs. For example behaviour, situational or contingent theories could provide new insights. Likewise, for the continuity and control of the collaboration the governance is an interesting research field in the case of SCP. Have all the SCPs in the Netherlands the same governance, and if not, why are they different? Is there an optimal governance structure for SCPs?

Transforming the collaborative concept into other branches

This research has focussed on LAs, SCP and procurement performance for local authorities. It is obviously possible that this conceptual structural collaboration concept could be executed in other business functions, like collaboration of human resource management or finance or legal etc. within (public) organisations, and could be researched empirically. Moreover, it would be interesting to investigate to what degree this SCP concept could be used to evaluate other collaborative arrangements in the public sector and outsourcing arrangements. Further research is required to discover the financial benefits in financial buying savings, and what the impact of consolidating the demands of LAs would be for supplier markets. Furthermore, it is worth examining in what ways the activities of SCP can be centralised for LAs, or if parts of the activities of SCPs can be merged in the Netherlands, or a form of cooperation between several collaborative organisations can be implemented in the same region.

Publication

In continuation of this thesis, an invitation was received by the *International Journal of Collaborative Engineering* to publish an article. The area of interest concerns the value, notably in innovation and flexibility, for the LAs of collaborative procurement in the construction commodities. Another area is efficiency in tendering costs through JPGs. Data can be drawn from the qualitative or quantitative research in this study and can possibly be extended with additional research. The researcher also has a VNG request to publish a two-page article (Autumn, 2019) in *Binnelands Bestuur*, which is a weekly public services journal distributed to LAs public members.

The researcher of this thesis intends to build on the power of horizontal collaboration in and between homogeneous organisations and explore further interest in effective structures of an optimal mechanism for collaboration tailored to the situation. This work will initially focus on the public sector, but does not exclude the private sector in the long term, especially SMEs.

References

Afonso, A., Schuknecht, L., & Tanzi, V. (2010). Public sector efficiency: evidence for new EU member states and emerging markets. *Applied Economics, 42*(17), 2147-2164. doi: 10.1080/00036840701765460

Ahmed, A., Qayed, K. I., Abdulrahman, M., Tavares, W., & Rosenfeld, J. (2014). The multiple mini-interview for selecting medical residents: first experience in the Middle East region. *Med Teach, 36*(8), 703-709. doi: 10.3109/0142159X.2014.907875

Al-Karaghouli, W., Ghoneim, A., Sharif, A., & Dwivedi, Y. K. (2013). The Effect of Knowledge Management in Enhancing the Procurement Process in the UK Healthcare Supply Chain. *Information Systems Management 30*, 35-49. doi: 10.1080/10580530.2013.739888

Albano, G. L., & Sparro, M. (2010). Flexible Strategies for Centralized Public Procurement. *Review of Economics and Institutions, 1*(2). doi: 10.5202/rei.v1i2.4

Alchian, A. A., & Demsetz, H. (1972). Production, Information costs, and economic organization. *American Economic Association, 62*(5), 777-795.

Allal-Chérif, O., & Maira, S. (2011). Collaboration as an anti-crisis solution: the role of the procurement function. *International Journal of Physical Distribution & Logistics Management, 41*(9), 860-877. doi: 10.1108/09600031111175825

Allers, M. A., & Van Ommeren, B. (2016). Intermunicipal cooperation, municipal amalgamation and the price of credit. *Local Government Studies, 42*(5), 717-738. doi: 10.1080/03003930.2016.1171754

Amit, R., & Schoemaker, P. J. H. (1993). Strategic Assets and Organizational Rent. *Strategic Management Journal, 14*(1), 33-46.

Arnold, U. (1996). Purchasing consortia: Theoretical framework and empirical data," *Revista de Economia e Direito, 1*(2), 5-26.

Audit-Office-Audit-Commission-Office-For-National-Statistics, H.-T.-C.-O.-N. (2001). Choosing the right FABRIC: A framework for perfomrance information.

Baker, S. E., & Edwards, R. (2012). How many qualitative interviews is enough? *National Centre for Research Methods Review Paper*.

Bakker, E., Walker, H., & Harland, C. (2006). *Organising for collaborative procurement: an initial conceptual framework*: PrAcdemics Press, Boca Raton, FL.

Bals, L., & Turkulainen, V. (2017). Achieving efficiency and effectiveness in Purchasing and Supply Management: Organization design and outsourcing. *Journal of Purchasing and Supply Management*. doi: 10.1016/j.pursup.2017.06.003

Barnett, C., Barr, J., Christie, A., Duff, B., & Hext, S. (2010). *Measuring the Impact and Value for Money of Governance & Conflict Programmes*. Itad.

Barney, J. B. (1991). Firm resources and competitive advantage. *Journal of management 17*(1), 99-120.

Barney, J. B. (2001). "Is the resource-based view a useful perspective for strategic management research? Yes". *The Academy of Management Review, 26*(1), 41-56.

Barroso, J. M. (2010). *Europa 2020, A European strategy for smart, sustainable and inclusive growth*. (Brussels, 3.3.2010 COM(2010) 2020). Brussels: European Commission.

Barthelemy, J. (2003). The seven deadly sins of outsourcing. *Acadamy of Management Executive, 17*(2), 87-98.

Bartlett, M. S. (1954). A note on the multiplying factors for various chi square approximations. *Journal of Royal Statistical Society, 16*(Series B), 296-298.

Becerra, M. (2009). *Theory of the Firm for Strategic Management: Economic Value Analysis*. New York: Cambridge University Press.

Bennet, A., & Braumoeller, B. (2005). *Where the Model Frequently Meets the Road: Combining Statistical, Formal and Case Study Methods*. Paper presented at the IQRM January 2005 Arizona

Berenson, M. L., & Levine, D. M. (1996). *Basic business statistics concepts and applications*. London: Prentice-Hall.

Bhagat, P., Byramjee, F., & Taiani, V. (2010). A framework of total value orientation for strategic outsourcing decisions. *Competitiveness Review: An International Business Journal, 20*(4), 305-321. doi: 10.1108/10595421011065316

Bierman, H., Bonini, C. P., & Hausman, W. H. (1991). *Quantitative Analysis for Business Decisions* (8 ed.). Homewood and Boston: Irwin.

Birou, L. M., & Fawcett, S. E. (1993). International Purchasing: Benefits, Requirements, and Challenges. *Journal of Supply Chain Management, 29*(1). doi: 10.1111/j.1745-493X.1993.tb00004.x

Bizob. (2017). *Bizob Financial Annual Statement 2016*. Oirschot, Netherlands: Finance & Control Bizob.

Blaikie, N. W. H. (2007). *Approaches to Social Enquiry: Advancing Knowledge* (2nd ed.). Cambridge: Polity.

Blaikie, N. W. H. (2010). *Designing Social Research*. Cambridge: Polity Press.

Blaug, M. (1992). *The methodology of economics* (Second edition ed.). Cambridge Cambridge university press.

Bordass, B., & Leaman, A. (2013). A new professionalism: remedy or fantasy? *Building Research & Information, 41*(1), 1-7. doi: 10.1080/09613218.2012.750572

Bordens, K. S., & Abott, B. B. (2002). *Research design and methods, a process approach* (5th ed.). New York: McGraw-Hill Higher Education.

Borman, M., & Janssen, M. (2013). Reconciling two approaches to critical success factors: The case of shared services in the public sector. *International Journal of Information Management, 33*(2), 390-400. doi: 10.1016/j.ijinfomgt.2012.05.012

Boschma, R., A. (2005). Proximity and Innovation: A Critical Assessment. *Regional Studies, 39*(1), 61-74. doi: 10.1080/0034340052000320887

Bowen, G. A. (2009). Document Analysis as a Qualitative Research Method. *Qualitative Research Journal, 9*(2), 27-40. doi: 10.3316/qrj0902027

Boxall, P. (2003). HR strategy and competitive advantage in the service sector. *Human Resource Management, 13*(3), 5 - 20.

Boxall, P., & Purcell, J. (2003). *Strategy and Human Resource Management*. New York: Palgrave Macmillan.

Boyne, G. (2003). Sources of Public Service Improvement: A Critical Review and Research Agenda. . *Journal of Public Administration Research and Theory, 13*(3), 367-394.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. doi: 10.1191/1478088706qp063oa

Bregoli, I. (2012). Effects of DMO Coordination on Destination Brand Identity: A Mixed-Method Study on the City of Edinburgh. *Journal of Travel Research, 52*(2), 212-224. doi: 10.1177/0047287512461566

Brewer, B., Wallin, C., & Ashenbaum, B. (2014). Outsourcing the procurement function: Do actions and results align with theory? *Journal of Purchasing and Supply Management, 20*(3), 186-194. doi: 10.1016/j.pursup.2014.02.004

Bryman, A. (2016a). Integrating quantitative and qualitative research: how is it done? *Qualitative Research, 6*(1), 97-113. doi: 10.1177/1468794106058877

Bryman, A. (2016b). *Social Research Methods* (5 ed.). Oxford: Oxford Unversity Press.

Bulling, D. (2005). *Development of an instrument to gauge preparedness of clergy for disaster response work: A mixed methods study*. Unversity of Nebraska-Lincoln. Unpublished.

Burns, E., Fenwick, J., Schmied, V., & Sheehan, A. (2012). Reflexivity in midwifery research: the insider/outsider debate. *Midwifery, 28*(1), 52-60. doi: 10.1016/j.midw.2010.10.018

Bustinza, O. F., Arias-Aranda, D., & Gutierrez-Gutierrez, L. (2010). Outsourcing, competitive capabilities and performance: an empirical study in service firms. *International Journal of Production Economics, 126*(2), 276-288. doi: 10.1016/j.ijpe.2010.03.023

Caers, R., Bois, C. D., Jegers, M., Gieter, S. D., Schepers, C., & Pepermans, R. (2006). Principal-agent relationships on the stewardship-agency axis. *Nonprofit Management and Leadership, 17*(1), 25-47. doi: 10.1002/nml.129

Caers, R., Du Bois, C., Jegers, M., De Gieter, S., De Cooman, R., & Pepermans, R. (2009). A micro-economic perspective on manager selection in nonprofit organizations. *European Journal of Operational Research, 192*(1), 173-197. doi: 10.1016/j.ejor.2007.08.042

Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management,, Vol. 31* (No. 6), pp. 515-524.

Caniëls, M. C. J., & Roeleveld, A. (2009). Power and dependence perspectives on outsourcing decisions. *European Management Journal, 27*(6), 402-417. doi: 10.1016/j.emj.2009.01.001

Cao, M., & Zhang, Q. (2011). Supply chain collaboration: Impact on collaborative advantage and firm performance. *Journal of Operations Management, 29*(3), 163-180. doi: 10.1016/j.jom.2010.12.008

Carlile, P. R. (2002). A pragmatic view of knowledge and boundaries: Boundary objects in new product development. *Organization Science, 13*(4), 442-455.

Carpenter, D. (2010). *Reputation and power: Organizational image and pharmaceutical regulation at the FDA*. Princeton, New York: Princeton University Press.

Cartwright, N. (1999). The Limits of Exact Science, from Economics to Physics. *Science -- Philosophy, 7*(3), 318-336. doi: 10.1162/posc.1999.7.3.318

Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research, 1*, 245-276.

Celec, S., Nosari, J., & Voich Jr., D. (2003). Performance measures for evaluating the financial benefits of state term commodity contracts. *Journal of Public Procurement 3*(1), 43-56.

Cerny, C. A., & Kaiser, H. F. (1977). A study of a measure of sampling adequacy for factor-analytic correlation matrices. *Multivariate Behavioral Research, 12*(1), 43-47.

Challis, L., Fuller, S., Henwood, M., Klein, R., Plowden, W., Webb, A., . . . Wistow, G. (1988). *Joint Approaches w Social Policy: Rationality and Practice,* . Cambridge.: Cambridge University Press.

Chang, J. (2017). The effects of buyer-supplier's collaboration on knowledge and product innovation. *Industrial Marketing Management*. doi: 10.1016/j.indmarman.2017.04.003

Chapman, R. L., Soosay, C., & Kandampully, J. (2003). "Innovation in logistic services and the new business model: A conceptual framework" *International Journal of Physical Distribution & Logistics Management, 33*(7), 630-650. doi: 10.1108/09600030310499295

Chapman, T. L., Gupta, A., & Mango, P. D. (1998). Group purchasing is not a panacea for US hospitals. *McKinsey Quarterly*(1), 160-165.

Chen, H. H., & Lee, P. Y. (2009). The driving drivers of dynamic competitive capabilities: a new perspective on competition. *European Business Review, 21*(1), 79-91. doi: 10.1108/09555340910925193

Coase, R. H. (1937). The Nature of the Firm. *Economica, 4*(16), 386-405.

Cohen, R. J., Philips, S. M., & Swerdlik, M. E. (1996). *Psychological testing and assessment: An introduction tot test and measurement* (3rd ed. ed.). CA: Mayfield.

Collis, D. J. (1995). Research Note: How Valuable are Organizational Capabilities. *Strategic Management Journal 15*((Winter 1995)), 143-152.

Collis, J., & Hussey, R. (2014). *Business Research, A Practical Guide for Undergraduate and Postgraduate Students*. New York: Palgrave Macmillan.

Costantino, N., Dotoli, M., Falagario, M., & Sciancalepore, F. (2012). Balancing the additional costs of purchasing and the vendor set dimension to reduce public procurement costs. *Journal of Purchasing and Supply Management, 18*(3), 189-198. doi: 10.1016/j.pursup.2012.08.001

Coulson, A. (1997). 'Transaction cost economics' and its implications for local governance. *Local Government Studies, 23*(1), 107-113. doi: 10.1080/03003939708433857

Creswell, J. W. (2003). *Research design*. London: Sage Pbulciations, Inc.

Creswell, J. W., & Clark, V. L. P. (2011). *Designing and conducting mixed methods research*. London: Sage Pulbications.

D'Aunno, T. A., & Zuckerman, H. S. (1987). A life-cycle model of organizational federations: the case of hospitals. *Acadamy of Management Review 12* (3), 534–545.

Dale-Clough, L. (2015). Public procurement of innovation and local authority procurement: procurement modes and framework conditions in three European cities. *Innovation: The European Journal of Social Science Research, 28*(3), 220-242. doi: 10.1080/13511610.2015.1012709

De Boer, L., Holmen, E., & Pop-Sitar, C. (2003). Purchasing as an organizational design problem: the case of non-product-related items and services. *Management Decision, 41*(19), 911-922. doi: 10.1108/00251740310500903

De Klerk, M., Gilsing, R., & Timmermans, J. (2010). *Op weg met de WMO Evaluatie van de Wet maatschappelijke ondersteuning*.

De Vaus, D. A. (2002). *Surveys in social research*. London: Routledge.

De Vries, B. (2014). Intergemeentelijke samenwerking geen randverschijnsel meer: De balans tussen autonomie en synergie. *VNG Magazine, 18*, 16-17.

De-Groene-Rand. (2010). *Onderzoeksrapport Inkoop en aanbesteding gemeente Heeze Leende*. gemeente Heezel Leende.

Deasy, M., White, G. R. T., Parfitt, S., & Ringwald, K. (2014). Asymmetric Procurement in the Public Sector. *Strategic Change, 23*(1-2), 21-29. doi: 10.1002/jsc.1957

Dewah, P., & Mutula, S. M. (2014). Knowledge retention strategies in public sector organizations. *Information Development, 32*(3), 362-376. doi: 10.1177/0266666914551070

Dijkhoff, T. (2014). The Dutch Social Support Act in the shadow of the decentralization dream. *Journal of Social Welfare and Family Law, 36*(3), 276-294. doi: 10.1080/09649069.2014.933590

Dommeyer, C. J., & Moriarty, E. (1999). Comparing two forms of an e-mail survey: embedded vs. attached. *International Journal of Market Research, 41*(1), 39-50.

Donaldson, L. (1990). The Ethereal Hand: Organizational Economics and Management Theory. *The Academy of Management Review, 15*(3), 369-381.

Dorger, M. (1999). Cooperation for Cost-Effectiveness in Purchasing. *NEW DIRECTIONS FOR HIGHER EDUCATION, 106*, 67-78.

Dow, S. C. (1997). Mainstream economic methodology. *Cambridge Journal of Economics, 21*, 73-93.

Downward, P., & Mearman, A. (2007). Retroduction as mixed-methods triangulation in economic research: reorienting economics into social science. . *Cambridge Journal of Economics 31*(1), 77-99.

Driedonks, B. A., Gevers, J. M. P., & Van Weele, A. J. (2010). Managing sourcing team effectiveness: The need for a team perspective in purchasing organizations. *Journal of Purchasing and Supply Management, 16*(2), 109-117. doi: 10.1016/j.pursup.2010.03.007

Driedonks, B. A., Gevers, J. M. P., & Van Weele, A. J. (2014). Success factors for sourcing teams: How to foster sourcing team effectiveness. *European Management Journal, 32*(2), 288-304. doi: 10.1016/j.emj.2013.01.009

Dunn, W. R., Wellman, G. C., & Bevan, J. A. (1994). Enhanced resistance artery sensitivity to agonists under isobasic compared with isometric conditions. *American Journal of Physiology, 266*, 417-455.

Dyer, J. H. (1997). Effective interfirm collaboration: How Firms minimize transaction costs and maximize transaction value. *Strategic Management Journal, 18*(7), 535-556.

Dyer, J. H., & Singh, H. (1998). The relational view: cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review 23*(4), 660-679.

Edler, J., Ruhland, S., Hafner, S., Rigby, J., Georghiou, L., Hommen, L., . . . Papadakou, M. (2005). *Review of Issues at Stake*. Karlsruhe.: Fraunhofer ISI.

Eisenhardt, K. M. (1985). Control: Organizational and Economic Approaches. *Management Science, 31*(2), 134-149.

Eisenhardt, K. M. (1989). "Agency Theory: An Assessment and Review". *Acadamy of Management Review, 14*(1), 57-74.

Eisenhardt, K. M., & Martin, A. (2000). Dynamic capabilities: what are they? *Strategic Management 21*, 1105 - 1121.

Emerson, R. M. (1962). Power Dependence Relations. *American Sociological Review, , Vol. 27*(1), 31-41.

Enthoven, A. C. (1994). On the ideal market structure for third-party purchasing of health care. *Social Science and Medicine 39* (10), 1413–1424.

Environment, M.-o.-I.-a.-. (2012). *Duurzaam Inkopen*.

EPA. (2017). *Public Procurement*. Wexford: EPA Retrieved from http://www.epa.ie/.

Eriksson, P. E., & Westerberg, M. (2011). Effects of cooperative procurement procedures on construction project performance: A conceptual framework.

International Journal of Project Management, 29(2), 197-208. doi: 10.1016/j.ijproman.2010.01.003

Erridge, A. (2007). Public Procurement, Publci Value and the Nothern Ireland Unemployment pilot project. *Journal of Public Administration 85*(4), 1023-1043.

Essig, M. (2000). Purchasing consortia as symbiotic relationships: developing the concept of "consortium sourcing". *European Journal of Purchasing & Supply Management 6*, 13-22.

European-Commission. (2017). *Public Procurement*. Retrieved from https://ec.europa.eu/growth/single-market/public-procurement_en.

European-Parlament-and-the-council-of-the-European-Union. (2014). *DIRECTIVE 2014/24/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 February 2014 on public procurement and repealing Directive 2004/18/EC (Text with EEA relevance)*. Brussels: Official Journal of the EuropeanUnion.

Faasse, P., & Koens, L. (2017). Rapport Gezond verstand - Rathenau Instituut. Den Haag Telefoon: Rathenau Instituut.

Faes, W., Matthyssens, P., & Vandenbempt, K. (2000). The Pursuit of Global Purchasing Synergy. *Industrial Marketing Management 29*, 539-553.

Fayezi, S., O'Loughlin, A., & Zutshi, A. (2012). Agency theory and supply chain management: a structured literature review. *Supply Chain Management: An International Journal, 17*(5), 556-570. doi: 10.1108/13598541211258618

Fernandez, I., & Kekale, T. (2007). Strategic procurement outsourcing: a paradox in current theory *Int. Journal procurement management, 1*(1/2), 166-177.

Fetters, M. D., Curry, L. A., & Creswell, J. W. (2013). Achieving integration in mixed methods designs-principles and practices. *Health Serv Res, 48*(6 Pt 2), 2134-2156. doi: 10.1111/1475-6773.12117

Flynn, A., & Davis, P. (2016). Firms' experience of SME-friendly policy and their participation and success in public procurement. *Journal of Small Business and Enterprise Development, 23*(3), 616-635. doi: 10.1108/JSBED-10-2015-0140

Flynn, A., McKevitt, D., & Davis, P. (2015). The impact of size on small and medium-sized enterprise public sector tendering. *International Small Business Journal, 33*(4), 443-461. doi: 10.1177/0266242613503178

Francis, J. J., Eccles, M. P., Johnston, M., Walker, A., Grimshaw, J., & Foy, R. (2004). Constructing ques- tionnaires based on the theory of planned behaviour: a manual for health services researchers. *University of Newcastle.*

Frels, R. K., & Onwuegbuzie, A. J. (2013). Administering Quantitative Instruments With Qualitative Interviews: A Mixed Research Approach. *Journal of*

Counseling & Development, 91(2), 184-194. doi: 10.1002/j.1556-6676.2013.00085.x

Freytag, P. V., Clarke, A. H., & Evald, M. R. (2012). Reconsidering outsourcing solutions. *European Management Journal, 30*(2), 99-110. doi: 10.1016/j.emj.2011.11.002

Galaskiewicz, J. (1985). Interorganizational relations. *Annual Review of Sociology 11*, 281-304.

Gehlbach, H. (2015). Seven Survey Sins. *The Journal of Early Adolescence, 35*(5-6), 883-897. doi: 10.1177/0272431615578276

Gelderman, C. J., & Van Weele, A. J. (2003). Handling measurement issues and strategic directions in Kraljic's purchasing portfolio model. *Journal of Purchasing and Supply Management, 9*(5-6), 207-216. doi: 10.1016/j.pursup.2003.07.001

Ghodeswar, B., & Vaidyanathan, J. (2008). Business process outsourcing: an approach to gain access to world-class capabilities. *Business Process Management Journal, 14*(1), 23-38. doi: 10.1108/14637150810849382

Goggin, M. L. (1986). The "Too Few Cases/Too Many Variables" Problem in Implementation Research *The Western Political Quarterly, 39*(2), 328-347.

Gorsuch, R. L. (1983). *Factor analysis* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Gorsuch, R. L. (1990). Common factor analysis versus component analysis: Some well and little known facts *Multivariate Behavioral Research, 25*, 33-39.

Gottschalk, P., & Solli-Sæther, H. (2005). Critical success factors from IT outsourcing theories: an empirical study. *Industrial Management & Data Systems, 105*(6), 685-702. doi: 10.1108/02635570510606941

Grandia, J. (2016). Finding the missing link: examining the mediating role of sustainable public procurement behaviour. *Journal of Cleaner Production, 124*, 183-190. doi: 10.1016/j.jclepro.2016.02.102

Grant, G., McKnight, S., Uruthirapathy, A., & Brown, A. (2007). Designing governance for shared services organizations in the public service. *Government Information Quarterly, 24*(3), 522-538. doi: 10.1016/j.giq.2006.09.005

Green, S. B., & Salkind, N. J. (2014). *Using SPSS for Windows and Macintosh* (Seventh ed.). United States: Pearson.

Griffith, A. (1998). Insider / outsider: Epistemological priveledge and mothering work. *Human studies, 21*, 361-376.

Grossi, G., Mori, E., & Bardelli, F. (2014). From Consolidation to Segment Reporting in Local Government: Accountability Needs, Accounting Standards, and the Effect on Decision-Makers. *Journal of Modern Accounting and Auditing, 10*(1), 32-46.

Guest, G. S., MacQueen, K. M., & Nameney, E. E. (2012). *Applied Thematic Analysis*: Sage Publications UK.

Guo, C., & Acar, M. (2005). Understanding collaboration among nonprofit organizations: combining resource dependency, institutional, and network perspectives. *Nonprofit and Voluntary Sector Quarterly, 34*(3), 340-361.

Hamel, G., & Prahalad, C. (1990). Strategy as stretch amd leverage. *Harvard Business Review, 71*(2), 75-84.

Harland, C., Knight, L., Lamming, R., & Walker, H. (2005). Outsourcing: assessing the risks and benefits for organisations, sectors and nations. *International Journal of Operations & Production Management, 25*(9), 831-850. doi: 10.1108/0144357051061392

Hartmann, A., Davies, A., & Frederiksen, L. (2010). Learning to deliver service ‐ enhanced public infrastructure: balancing contractual and relational capabilities. *Construction Management and Economics, 28*(11), 1165-1175. doi: 10.1080/01446193.2010.521942

Heckscher, E. F. (1919). The Effect of Foreign Trade on the distribution of income. *Ekonomisk Tidschrift*, 497 - 512.

Henson, R., Capraro, R. M., & Capraro, M. M. (2004). Reporting practice and use of exploratory factor analysis in educational research journals. *Research in the Schools, 11*, 61-72.

Herlin, H., & Pazirandeh, A. (2012). Nonprofit organizations shaping the market of supplies. *International Journal of Production Economics, 139*(2), 411-421. doi: 10.1016/j.ijpe.2011.04.003

Hesse-Biber, S. (2015). Mixed Methods Research: The "Thing-ness" Problem. *Qual Health Res, 25*(6), 775-788. doi: 10.1177/1049732315580558

Hill, C., & Lynn, L. (2003). Producing human services Why do agencies collaborate? *Public Management Review, 5*(1), 63-81. doi: 10.1080/1461667022000028861

Hill, T. (2005). *Operations management*: Palgrave Macmilan.

Hitt, M. A., Bierman, L., Shimuzu, K., & Kochhar, R. (2001). Direct and moderating effects of human capital on strategy and performance in professional service firms: a resource-based perspective. *44*(1), 13-28.

Horn, J. L. (1965). A rationale and test for the number of factors in factor analysis. . *Psychometrika, 30*, 179-185.

House-of-Commons-Communities-and-Local-Government-Committee. (2014). Local Government procurement. In C. a. L. G. Committee (Ed.), (Vol. HC 712, pp. 10-20). London: House of Commons.

Hudson, B., Hardy, B., Henwood, M., & Wistow, G. (1999). In Pursuit of Inter-Agency Collaboration In The Public Sector. *Public Management Review, 1*(2), 235-260. doi: 10.1080/14719039900000005

Hyvönen, T., Järvinen, J., Oulasvirta, L., & Pellinen, J. (2012). Contracting out municipal accounting: the role of institutional entrepreneurship. *Accounting, Auditing & Accountability Journal, 25*(6), 944-963. doi: 10.1108/09513571211250198

Ingold, K., & Leifeld, P. (2014). Structural and Institutional Determinants of Influence Reputation: A Comparison of Collaborative and Adversarial Policy Networks in Decision Making and Implementation. *Journal of Public Administration Research and Theory*, muu043. doi: 10.1093/jopart/muu043

Janssen, M., & Joha, A. (2006). Motives for establishing shared service centers in public administrations. *International Journal of Information Management, 26*(2), 102-115. doi: 10.1016/j.ijinfomgt.2005.11.006

Janssen, M., & Joha, A. (2008). Emerging shared service organizations and the service-oriented enterprise Critical management issues. *Strategic Outsourcing: An International Journal 1*(1), 35-49. doi: 10.1108/17538290810857466

Janssen, M., Joha, A., & Weerakkody, V. (2007). Exploring relationships of shared service arrangements in local government. *Transforming Government: People, Process and Policy, 1*(3), 271-284. doi: 10.1108/17506160710778103

Janssen, M., Joha, A., & Zuurmond, A. (2009). Simulation and animation for adopting shared services: Evaluating and comparing alternative arrangements. *Government Information Quarterly, 26*(1), 15-24. doi: 10.1016/j.giq.2008.08.004

Jesson, J. K., Matheson, L., & Lacey, F. M. (2013). *Doing Your Literature Review Traditional and Systematic Techniques*. London: Sage Publications Ltd.

Jick, T. (1979). Mixing qualitative and quantitative methods: triangulation in action *Administrative Science Quarterly, 24*, 602-662.

Johansson, V. (2012). Negotiating Bureaucrats. *Public Administration, 90*(4), 1032-1046. doi: 10.1111/j.1467-9299.2012.02025.x

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed Methods Research: A Research Paradigm Whose Time Has Come. *Educational Researcher, 33*(7), 14-26.

Kaats, E., Klaveren van, P., & Opheij, W. (2006). *Organising between organisations*.

Kahn, J. H. (2006). Factor analysis in counseling psychology research, training, and practice: Principles, advances, and applications *The Counseling Psychologist, 34*, 684-718.

Kaiser, H. (1974). An index of factor simplicity. *Psychometrika, 39*, 31-36.

Kaiser, H. F. (1956). *The varimax method of factor analysis.* University of California, Berkeley. Not published

Kakabadse, A., & Kakabadse, N. (2002). Trends in Outsourcing: Contrasting Usa and Europe. *European Management Journal, 20*(2), 159-198.

Kamal, M. M. (2012). Shared services: lessons from private sector for public sector domain. *Journal of Enterprise Information Management, 25*(5), 431-440. doi: 10.1108/17410391211265124

Karatas-Ozkan, M., Anderson, A. R., Fayolle, A., Howells, J., & Condor, R. (2014). Understanding Entrepreneurship: Challenging Dominant Perspectives and Theorizing Entrepreneurship through New Postpositivist Epistemologies. *Journal of Small Business Management, 52*(4), 589-593. doi: 10.1111/jsbm.12124

Karjalainen, K. (2011). Estimating the cost effects of purchasing centralization—Empirical evidence from framework agreements in the public sector. *Journal of Purchasing and Supply Management, 17*(2), 87-97. doi: 10.1016/j.pursup.2010.09.001

Kastanioti, C., Kontodimopoulos, N., Stasinopoulos, D., Kapetaneas, N., & Polyzos, N. (2013). Public procurement of health technologies in Greece in an era of economic crisis. *Health Policy, 109*(1), 7-13. doi: 10.1016/j.healthpol.2012.03.015

Kastberg, G. (2014). Framing shared services. *Critical Perspectives on Accounting, 25*(8), 743-756. doi: 10.1016/j.cpa.2014.01.002

Kay, J. (1995). Foundations of Corporate Success: How Business Strategies Add Value. *Journal of Marketing, 58*, 109-112.

Kennedy, R., Riquier, C., & Sharp, B. (1996). Pratical Applications of Correspondence Analysis to Categorical Data in Market Research. *Journal of Targeting, Measurement and Analysis for Marketing, 5*, 56-70.

Kennedy, S. M., Grossman, R. A., & Ehrenreich-May, J. (2016). Revisiting the Factor Structure of the White Bear Suppression Inventory in Adolescents: An Exploratory Structural Equation Modeling Approach. *Personality and Individual Differences, 92*, 186-190. doi: 10.1016/j.paid.2015.12.020

Keough, M. (1993). Buying your way to the top. . *The McKinsey Quarterly, 3*(41-62).

Kern, T., & Willcocks, L. (2002). Exploring relationships in information technology outsourcing: the interaction approach. *European Journal of Information Systems, 11* 3-19.

Khoshlahn, M., & Ardabili, F. S. (2016). The Role of Organizational Agility and Transformational Leadership in Service Recovery Prediction. *Procedia - Social and Behavioral Sciences, 230*, 142-149. doi: 10.1016/j.sbspro.2016.09.018

Klein Woolthuis, R. (1999). Sleeping with the enemy: trust, dependence and contract in interorganisational relationships. *Ph.D. Dissertation University of Twente, Enschede*.

Knol, A., Janssen, M., & Sol, H. (2014). A taxonomy of management challenges for developing shared services arrangements. *European Management Journal, 32*(1), 91-103. doi: 10.1016/j.emj.2013.02.006

Kraljic, P. (1983). Purchasing must become supply chain management. . *Harvard Business Review 61*, 109-117.

Krishan, K., Kanchan, T., & Sharma, A. (2012). Multiplication factor versus regression analysis in stature estimation from hand and foot dimensions. *J Forensic Leg Med, 19*(4), 211-214. doi: 10.1016/j.jflm.2011.12.024

Krishna, V. (2009). *Auction Theory*: Academic Press.

Krueger, S., & McGuire, M. (2005). A Transaction Costs Explanation of Interlocal Government Collaboration.

Kuhn, T. (1962). *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.

Kumar, S., & Gulati, R. (2010). Measuring efficiency, effectiveness and performance of Indian public sector banks. *International Journal of Productivity and Performance Management, 59*(1), 51-74. doi: 10.1108/17410401011006112

Lam, T., & Gale, K. (2014). Highway maintenance: impact of framework agreements on contractor performance. *Engineering, Construction and Architectural Management, 21*(3), 336-347. doi: 10.1108/ecam-02-2013-0016

Lankford, W. M., & Parsa, F. (1999). Outsourcing: a primer management decision. *37*(3-4), 310.

Länsiluoto, A., Järvenpää, M., & Krumwiede, K. (2013). Conflicting interests but filtered key targets: Stakeholder and resource-dependency analyses at a University of Applied Sciences. *Management Accounting Research, 24*(3), 228-245. doi: 10.1016/j.mar.2013.02.001

Levine, S., & White, P. (1961). Exchange as a Conceptual Framework for the Study of Inter- Organisational Relationships. *Administrative Science Quarterly, 5*, 583-601.

Levitt, R. E., Wang, C. M. A., Ho, S. P., & Javernick-Will, A. N. (2012). Encouraging knowledge-sharing in engineering firms – part I: Incentives, disincentives, and the impacts of firm context. *Engineering and Project Organization Journal, 2,* 231-239.

Li, S., Ragu-Nathan, B., Ragu-Nathan, T. S., & Subba Rao, S. (2006). The impact of supply chain management practices on competitive advantage and organizational performance. *Omega, 34*(2), 107-124. doi: 10.1016/j.omega.2004.08.002

Lincoln, Y. S., & Guba, E. G. (2000). *Paradigmatic controversies, contradictions, and emerging influences* (Vol. 2). London: Thousand Oaks, CA: Sage.

Lingard, H., Hughes, W., & Chinyio, E. (1998). The impact of contractor selection method on transaction costs: a review. *Journal of Construction Procurement, 4*(2), 89-102.

Little, R. J. A. (1998). Test of Missing Completely at Random for Multivariate Data With Missing Values. *Journa of the American Statistical Association, 83,* 1198-1202.

Ljungquist, U. (2013). Adding dynamics to core competence concept applications. *European Business Review 25*(5), 453-465. doi: 10.1108/EBR-09-2012-0052

Loader, K. (2015). SME suppliers and the challenge of public procurement: Evidence revealed by a UK government online feedback facility. *Journal of Purchasing and Supply Management, 21*(2), 103-112. doi: 10.1016/j.pursup.2014.12.003

Lovie, P. (1986). *New Developments in Statistics for Psychology and the Social Sciences*. London: British Psychological Society.

Lu, Q., Meng, F., & Goh, M. (2014). Choice of supply chain governance: Self-managing or outsourcing? *International Journal of Production Economics, 154*, 32-38. doi: 10.1016/j.ijpe.2014.03.022

Luzzini, D., Caniato, F., Ronchi, S., & Spina, G. (2012). A transaction costs approach to purchasing portfolio management. *International Journal of Operations & Production Management, 32*(9), 1015-1042. doi: 10.1108/01443571211265684

Lysons, K., & Farrington, B. (2006). *Purchasing and Supply Chain Management*. Harlow: Pearson Education Limited.

Makkonen, H., Olkkonen, R., & Halinen, A. (2012). Organizational buying as muddling through: A practice–theory approach. *Journal of Business Research, 65*(6), 773-780. doi: 10.1016/j.jbusres.2010.12.015

Malatesta, D., & Smith, C. R. (2014). Lessons from Resource Dependence Theory for Contemporary Public and Nonprofit Management. *Public Administration Review, 74*(1), 14-25. doi: 10.1111/puar.12181

Malhotra, A., Gasain, S., & El Sawy, O. A. (2005). Absorptive capacity configurations in supply chains: gearing for partner-enabled market knowledge creation *MIS Quarterly 29*(1), 145-187.

Marquardt, D. W. (1980). You should Standardize the Predictor Variables in Your Regression Models. *Journal of the American Statistical Association, 75*(369), 87-91.

Marsh, D., & Stoker, G. (2002). *Theory and Methods in Political Science* (New York: Palgrave Millan. ed.). New York: Palgrave Macmillan.

Marvel, H. P., & Yang, H. (2008). Group purchasing, nonlinear tariffs, and oligopoly. *International Journal of Industrial Organization, 26*(5), 1090-1105. doi: 10.1016/j.ijindorg.2007.10.002

Maxwell, J. A. (2005). *Qualitative research design: An interactive approach* (Vol. 2nd Ed.): Thousand Oaks, CA SAGE Publications.

McCloskey, D. N. (1983). The Rhetoric of Economics. *Journal of Economic Literature, 21*(2), 481-517.

McCue, C., & Prier, E. (2007). *Using agency theory to model cooperative public purchasing* (K. V. Thai & G. Piga Eds.): PrAcademic Press.

McIvor, R. (2009). How the transaction cost and resource-based theories of the firm inform outsourcing evaluation. *Journal of Operations Management, 27*(1), 45-63. doi: 10.1016/j.jom.2008.03.004

McIvor, R., McCracken, M., & McHugh, M. (2011). Creating outsourced shared services arrangements: Lessons from the public sector. *European Management Journal, 29*(6), 448-461. doi: 10.1016/j.emj.2011.06.001

Meehan, J., & Bryde, D. J. (2014). Procuring sustainably in social housing: The role of social capital. *Journal of Purchasing and Supply Management, 20*(2), 74-81. doi: 10.1016/j.pursup.2014.01.002

Meehan, J., Ludbrook, M. N., & Mason, C. J. (2016). Collaborative public procurement: Institutional explanations of legitimised resistance. *Journal of Purchasing and Supply Management, 22*(3), 160-170. doi: 10.1016/j.pursup.2016.03.002

Mercier, P. (2009). *Nigh Train to Lisbon*. London: Atlantic books.

Ministry-of-Economic-Affairs. (2012). *Aanbestedingswet 2012, Geldend van 01-07-2016 t/m heden*. 's-Gravenhage.

Ministry-of-Economic-Affairs. (2015). *Public collaborative procurement organisations*. The Haque.

Ministry-of-Economic-Affairs. (2016). *Besluit van 24 juni 2016 tot wijziging van het Aanbestedingsbesluit in verband met de implementatie van aanbestedingsrichtlijnen 2014/23/EU, 2014/24/EU en 2014/25/EU (Besluit wijziging Aanbestedingsbesluit inzake aanbestedingsrichtlijnen 2014/23/EU, 2014/24/EU en 2014/25/EU)*. 's-Gravenhage: Staatsblad van het Koninkrijk der Nederlanden.

Ministry-of-Economic-Affairs. (2017). *Inkoopvolume van nederlandseoverheid-september 2016*. Barneveld: Significant.

Ministry-of-Infra-Structural-and-Environment. (2016). *Manifest-maatschappelijk-verantwoord-inkopen-2016-2020*. s' - Gravenhage.

Minnaar, R., & Vosselman, E. (2009). *Shared service centers and governance structure change: A transaction cost economics approach*. NiCE Working Paper

Mintzberg, H., & Ahlstrand, B. (1998). *Strategic Safari*. Harlow, UK: FT Prentice Hall

Mintzbert, H., Jorgensen, J., Dougherity, D., & Westley, F. (1996).Some Surprising Things About Collaboration-Knowing How People Connect Makes It Work Better. *Organizational dynamics*.

Montresor, S. (2004). Resources, capabilities, competences and the theory of the firm. *Journal of Economic Studies, 31*(5), 409-434. doi: 10.1108/01443580410555528

Morgan, G., & Smircich, L. (1980). The case of qualitative research. *Academy of Managment Review, 5*(4), 491-500.

Mosakowski, E. (1993). A Resource-Based Perspective on the Dynamic Strategy-Performance Relationship: An Empirical Examination of the Focus and Differentiation Strategies in Entrepreneurial Firms. *Journal of Management, 19*(4), 819-839. doi: 10.1177/014920639301900405

Murray, G., Rentell, P., & Geere, D. (2008). Procurement as a shared service in English local government. *International Journal of Public Sector Management, 21*(5), 540-555. doi: 10.1108/09513550810885822

Murray, G. J. (2009). Improving the validity of public procurement research. *International Journal of Public Sector Management, 22*(2), 91-103. doi: 10.1108/09513550910934501

Murray, R. (2011). *How to Write a Thesis*. Berkshire: Open University Press.

Nehmelman, R. (2015). Niet samenwerken, maar samengaan. *VNG magazine, 69*.

Nemati, A. R., Bhatti, A. M., Maqsal, M., Mansoor, I., & Naveed, F. (2010). Impact of Resource Based View and Resource Dependence Theory on Strategic Decision Making. *International Journal of Business and Management 5*(12).

Nesheim, T., & Smith, J. (2015). Knowledge sharing in projects: does employment arrangement matter? *Personnel Review, 44*(2), 255-269. doi: 10.1108/pr-11-2013-0203

Niehaves, B., & Krause, A. (2010). Shared service strategies in local government – a multiple case study exploration. *Transforming Government: People, Process and Policy, 4*(3), 266-279. doi: 10.1108/17506161011065235

Nocon, A. (1994). *Collaboration in Community Care in the 1990s*. Sunderland: Business Education Publishers.

Nollet, J., & Beaulieu, M. (2003). The development of group purchasing: an empirical study in the healthcare sector. *Journal of Purchasing and Supply Management, 9*(1), 3-10. doi: 10.1016/s0969-7012(02)00034-5

Nollet, J., & Beaulieu, M. (2005). Should an organisation join a purchasing group? *Supply Chain Management: An International Journal, 10*(1), 11-17. doi: 10.1108/13598540510578333

Nollet, J., Calvi, R., Audet, E., & Côté, M. (2008). When excessive cost savings measurement drowns the objectives. *Journal of Purchasing and Supply Management, 14*(2), 125-135. doi: 10.1016/j.pursup.2008.03.002

OECD. (2015). *Government at a Glance 2015*. Retrieved from http://www.oecd.org/gov/Netherlands.pdf.

Ohlin, B. (1933). *Interregional and International Trade* Cambridge, Mass: Harvard Universtiy Press.

Olson, E. G. (2010). Supply chain opportunity in an uncertain economic recovery. *Supply Chain Management: An International Journal, 15*(6), 488-492. doi: 10.1108/13598541011080464

Paagmana, A., Tateb, M., Furtmuellerc, E., & DE Bloomd, J. (2015). An integrative literature review and empirical validation of motives for introducing shared services in government organizations. *International Journal of Information Management 35*(1), 110-123. doi: 10.1016/j.ijinfomgt.2014.10.006

Pallant, J. (2010). *SPSS survival manual: A step by step guide to data analysis using SPSS* (4 Ed.). Maidenhead: Open University Press/McGraw-Hill.

Parker, E. O., Chang, J., & Thomas, V. (2016). A Content Analysis of Quantitative Research in Journal of Marital and Family Therapy: A 10-Year Review. *J Marital Fam Ther, 42*(1), 3-18. doi: 10.1111/jmft.12138

Patrucco, A. S., Walker, H., Luzzini, D., & Ronchi, S. (2018). Which shape fits best? Designing the organizational form of local government procurement. *Journal of Purchasing and Supply Management*. doi: 10.1016/j.pursup.2018.06.003

Pavot, W., Diener, E., Colvin, C. R., & Sandvik, E. (1991). Further validation of the Satisfaction with Life Scale: evidence for the cross-method convergence of well-being measures. *Journal of Personality Assessment, 57*, 149-161.

Payne, G., & Grew, C. (2005). Unpacking 'Class Ambivalence': Some Conceptual and Methodological Issues in Accessing Class Cultures. *Sociology, 39*(5), 893-910. doi: 10.1177/0038038505058371

Pazirandeh, A. (2012). *"Purchasing in power asymmetry - a study of vaccine procurement for devloping countries"*. (PhD), Lund University, Lund.

Pazirandeh, A., & Herlin, H. (2014). Unfruitful cooperative purchasing. *Journal of Humanitarian Logistics and Supply Chain Management,, 4*(1), 24-42. doi: 10.1108/JHLSCM-06-2013-0020

Pazirandeh, A., & Norrman, A. (2014). An interrelation model of power and purchasing strategies: A study of vaccine purchase for developing countries. *Journal of Purchasing and Supply Management, 20*(1), 41-53. doi: 10.1016/j.pursup.2013.11.002

Pemer, F., Sieweke, J., Werr, A., Birkner, S., & Mohe, M. (2014). The cultural embeddedness of professional service purchasing—A comparative study of German and Swedish companies. *Journal of Purchasing and Supply Management, 20*(4), 273-285. doi: 10.1016/j.pursup.2014.05.002

Penrose, E. T. (1959). *The Theory of the Growth of the Firm*. Oxford MA: Oxford University Press.

Percival, G. L. (2009). Exploring the Influence of Local Policy Networks on the Implementation of Drug Policy Reform: The Case of California's Substance Abuse and Crime Prevention Act. *Journal of Public Administration Research and Theory, 19*(4), 795-815. doi: 10.1093/jopart/mun035

Peteraf, M. A. (1993). The cornerstones of competitive advantage: a resource-based view. *Strategic Management Journal, 14*, 179-191.

Petersen, O. H., & Houlberg, K. (2017). Cost savings or real efficiency gains? Heterogeneous effects of involving the private market in public service delivery. *Journal of Strategic Contracting and Negotiation, 2*(3), 206-226. doi: 10.1177/2055563617691989

Pettigrew, A. (1987). Context and action in the transformation of the firm. *Journal of management, 34*(6), 649-670.

Pettigrew, A. M. (1990). Longitudinal Field Research on Change: Theory and Practice. *Organization Science, 1*(3), 267-292.

Pfeffer, J., & Leong, A. (1977). Resource Allocations in United Funds: Examination of Power and Dependence. *Social Forces, 55*(3), 775-790.

Pfeffer, J., & Salancik, G. R. (1978). *The External Control of Organizations: A Resource Dependence Perspective*. New York: Harper & Row.

Pohl, M., & Förstl, K. (2011). Achieving purchasing competence through purchasing performance measurement system design—A multiple-case study analysis. *Journal of Purchasing and Supply Management, 17*(4), 231-245. doi: 10.1016/j.pursup.2011.04.001

Poppelaars, C. (2009a). *Steering a Course between Friends and Foes.* (PhD.), University of Leiden, Delft. (978-90-5972-303-0)

Poppelaars, C. (2009b). *Steering a Course between Friends and Foes, Why bureaucrats interact with interest groups.* (PhD.), Leiden, Delft. (ISBN 978-90-5972-303-0)

Proulx, K. E., Hager, M. A., & Klein, K. C. (2014). Models of collaboration between nonprofit organizations. *International Journal of Productivity and Performance Management, 63*(6), 746-765. doi: 10.1108/ijppm-06-2013-0121

Provan, K. G., & Kenis, P. (2007). Modes of Network Governance: Structure, Management, and Effectiveness. *Journal of Public Administration Research and Theory, 18*(2), 229-252. doi: 10.1093/jopart/mum015

Pulles, N. J., Veldman, J., & Schiele, H. (2014). Identifying innovative suppliers in business networks: An empirical study. *Industrial Marketing Management, 43*(3), 409-418. doi: 10.1016/j.indmarman.2013.12.009

Quélin, B., & Duhamel, F. (2003). Bringing Together Strategic Outsourcing and Corporate Strategy. *European Management Journal, 21*(5), 647-661. doi: 10.1016/s0263-2373(03)00113-0

Rainville, A. (2016). Standards in green public procurement – A framework to enhance innovation. *Journal of Cleaner Production*. doi: 10.1016/j.jclepro.2016.10.088

Ramsay, J. (2007). The dangers of methodological extremism. *Journal of Purchasing and Supply Management, 13*(3), 202-203. doi: 10.1016/j.pursup.2007.09.006

Reck, R. F., & Long, B. G. (1988). Purchasing: A competitive weapon. *Journal of Purchasing and Materials Management, 24*(3), 2-8.

Reio, T. G., & Shuck, B. (2014). Exploratory Factor Analysis: Implications for Theory, Research, and Practice. *Advances in Developing Human Resources, 17*(1), 12-25. doi: 10.1177/1523422314559804

Ricardo, D. (1817). *On the Principles of Political Economy and Taxation*.

Richter, P. C., & Brühl, R. (2017). Shared service center research: A review of the past, present, and future. *European Management Journal, 35*(1), 26-38. doi: 10.1016/j.emj.2016.08.004

Rietveld, T., & Van Hout, R. (1993). *Statistical Techniques for the Study of Language and Language Behaviour*. Berlin-New York: Mouton de Gruyter.

Rolfstam, M., Phillips, W., & Bakker, E. (2011). Public procurement of innovations, diffusion and endogenous institutions. *International Journal of Public Sector Management, 24*(5), 452-468. doi: http://dx.doi.org/10.1108/09513551111147178

Rosencranz, H., & McNevin, T. (1969). A factor analysis of attitudes toward the aged. *Gerontologist, 9*, 55-59.

Ruscio, J., & Roche, B. (2012). Determining the number of factors to retain in an exploratory factor analysis using comparison data of known factorial structure. *Psychol Assess, 24*(2), 282-292. doi: 10.1037/a0025697

Salianji, E. (2017). Public procurement in the EU. *European Journal of Economics, Law and Social Sciences, 1*(1), 239-246.

Salvatore, D. (1995). *International Economics*. New Jersey: Engle Woods.

Sanchez, R., & Heene, A. (2005). *Competence perspectives on managing internal processes* (Vol. 7). Amsterdam: Elsevier Science.

Sarros, J. C., Willis, R. J., & Palmer, G. (2005). The nature and purpose of the DBA: A case for clarity and quality control". *Education and Training, 47*(1), 40-52. doi: 10.1108/00400910510580629

Sartor, M., Orzes, G., Nassimbeni, G., Jia, F., & Lamming, R. (2014). International purchasing offices: Literature review and research directions. *Journal of Purchasing and Supply Management, 20*(1), 1-17. doi: 10.1016/j.pursup.2013.09.002

Savage, M., Bagnall, G., & Longhurst, B. (2001). Ordinary Ambivalent and defensive: Class Identities in the Northwest of England. *Journal of Sociology, 35*(4), 875-892.

Schalk, J. (2013). Interorganisational Relations and Goal Consensus: An Exploratory Study in Two Local Dutch Service Delivery Networks. *Local Government Studies, 39*(6), 853-877. doi: 10.1080/03003930.2011.615837

Schooner, S. (2013). Editors's note: Reflections on comparative procurement law. *Public Contract Law Journal., 43*(1), 1-2.

Schooner, S. L. (2002). Desiderata: objectives for a system of government. *Contract Law Public Procure, 103*, 103-110.

Schotanus, F., & Telgen, J. (2007). Developing a typology of organisational forms of cooperative purchasing. *Journal of Purchasing and Supply Management, 13*(1), 53-68. doi: 10.1016/j.pursup.2007.03.002

Schotanus, F., Telgen, J., & De Boer, L. (2009). Unraveling quantity discounts☆. *Omega, 37*(3), 510-521. doi: 10.1016/j.omega.2007.09.002

Schotanus, F., Telgen, J., & De Boer, L. (2010). Critical success factors for managing purchasing groups. *Journal of Purchasing and Supply Management, 16*(1), 51-60. doi: 10.1016/j.pursup.2009.10.002

Schulz, V., & Brenner, W. (2010). Characteristics of shared service centers. *Transforming Government: People, Process and Policy, 4*(3), 210-219. doi: 10.1108/17506161011065190

Sergeeva, A., & Andreeva, T. (2015). Knowledge Sharing Research. *Journal of Management Inquiry, 25*(3), 240-261. doi: 10.1177/1056492615618271

Singer, M., Konstantinidis, G., Roubik, E., & Beffermann, E. (2009). Does e-procurement save the state money? . *Journal of Public Procurement 9* (1), 58-78.

Sitlington, H., & Marshall, V. (2011). Do downsizing decisions affect organisational knowledge and performance? *Management Decision, 49*(1), 116-129. doi: 10.1108/00251741111094473

Smith, J. M. (1982). *Evolution and the Theory of Games* (1 st ed.). Cambridge: Cambridge University Press.

Smith, K. A., Vasudevan, S. P., & Tanniru, M. R. (1996). Organizational learning and resource-based theory: an integrative model. *Journal of Organizational Change Management, 1996, , Vol. 9* (No. 6), 41-53.

Smith, S., Winchester, D., Clegg, S., & Pang, V. (2013). Collaboration as a Strategic Service in Government Online Communities. *Journal of Change Management, 14*(2), 236-257. doi: 10.1080/14697017.2013.817472

Snee, R. D. (1973). "Some Aspects of Nonorthogonal Data, Analysis, Part I. Developing Prediction Equations," *Journal of Quality Technology, 5*, 67-79.

Sporrong, J., & Kadefors, A. (2014). Municipal consultancy procurement: new roles and practices. *Building Research & Information, 42*(5), 616-628. doi: 10.1080/09613218.2014.900260

Straub, D., Boudreau, M. C., & Gefen, D. (2004). Validation guidelines for is positivist research. *Communications of the Association for Information Systems 13*, 380-427.

Subramaniam, N., Collier, P., Phang, M., & Burke, G. (2011). The effects of perceived business uncertainty, external consultants and risk management on organisational outcomes. *Journal of Accounting & Organizational Change, 7*(2), 1332-1157. doi: 10.1108/18325911111139671

Sumo, R., Van der Valk, W., & Van Weele, A. J. (2012). *Innovation Through Performance-Based Contracts: A Transaction Cost Economics and Agency Theory Perspective*. Paper presented at the Proceedings of the 9th International Conference on Innovation and Management, Wuhan. <Go to ISI>://WOS:000313020500119

Surridge, P. (2007). Class belonging: a quantitative exploration of identity and consciousness. *Br J Sociol, 58*(2), 207-226. doi: 10.1111/j.1468-4446.2007.00148.x

Tabachnick, B. G., & Fidell, L. S. (2006). *Using Multivariate Statistics* (5th Edition) ed.). Needham Heights: Allyn & Bacon, Inc. .

Teece, D., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management *Strategic Management Journal, 18* (7), 509-533.

Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal, 28*(13), 1319-1350. doi: 10.1002/smj.640

Telgen, J. (2013). *presentatie Jan Telgen - Gouda - 11-oktober-2013*. presentation.

Tella, E., & Virolainen, V.-M. (2005). Motives behind purchasing consortia. *International Journal of Production Economics, 93-94*, 161-168. doi: 10.1016/j.ijpe.2004.06.014

Tokman, M., Glenn Richey, R., Deitz, G. D., & Adams, F. G. (2012). The Retailer's Perspective on the Link Between Logistical Resources and Perceived Customer Loyalty to Manufacturer Brands. *Journal of Business Logistics, 33*(3), 181-195.

Trautmann, G., Bals, L., & Hartmann, E. (2009). Global sourcing in integrated network structures: The case of hybrid purchasing organizations. *Journal of International Management, 15*(2), 194-208. doi: 10.1016/j.intman.2008.09.001

Treiblmaier, H., & Filzmoser, P. (2010). Exploratory factor analysis revisited: How robust methods support the detection of hidden multivariate data structures in IS research. *Information & Management, 47*(4), 197-207. doi: 10.1016/j.im.2010.02.002

Trepte, P. (2004). *Regulation Procurement*: Oxford University Press.

Tsasis, P. (2009). The social processes of interorganizational collaboration and conflict in nonprofit organizations. *Nonprofit Management and Leadership, 20*(1), 5-21. doi: 10.1002/nml.238

Tynkkynen, L. K., Keskimaki, I., & Lehto, J. (2013). Purchaser-provider splits in health care-the case of Finland. *Health Policy, 111*(3), 221-225. doi: 10.1016/j.healthpol.2013.05.012

Úbeda, R., Alsua, C., & Carrasco, N. (2015). Purchasing models and organizational performance: a study of key strategic tools. *Journal of Business Research, 68*(2), 177-188. doi: 10.1016/j.jbusres.2014.09.026

Union, E. (2010). *Introduction to public contracts for businesses in the EU*. http://europa.eu/policies-activities/tenders-contracts/index_en.htmS.

Unland, M., & Kleiner, B. H. (1996). *New developments in organizing around core competences*.

Urquhart, C. (2002). Applications of outsourcing theory to collaborative purchasing and licensing. *Vine, 32*(129), 63-70. doi: 10.1108/03055720210471157

Van de Laar, S. (2010). *Stronger by collaboration*. Delft: Eburon.

Van Houwelingen, P. (2017). Political participation and municipal population size: A meta-study. *Local Government Studies, 43*(3), 408-428. doi: 10.1080/03003930.2017.1300147

Van Puyvelde, S., Caers, R., Du Bois, C., & Jegers, M. (2014). Managerial Objectives and the Governance of Public and Non-Profit Organizations. *Public Management Review*, 1-17. doi: 10.1080/14719037.2014.969760

Van Weele, A. J. (2005). *Purchasing & Supply Chain Managment*. London: Thomsom.

Van Weele, A. J. (2006). *Purchasing & Supply Chain Managmenet, Analysis, Strategy, Planning and Practice* (Fourth ed.). London: Thomsom Learning.

Van Weele, A. J. (2007). On the need for fostering academic community rather than academic methodology in purchasing and supply chain management. *Journal of Purchasing and Supply Management, 13*(3), 204-206. doi: 10.1016/j.pursup.2007.09.007

Van Weele, A. J., & Rosemijer, F. (1998). Getting organised for purchasing and supply management in the information age; towards the virtual purchasing organisation? *Proceedings of 2nd Worldwide Research Symposium in Purchasing & Supply Management, London*, 421-431.

Van Weele, A. J., & Rozemeijer, F. (1996). Revolution in purchasing: Building competitive power through pro-active purchasing. . *European Journal of Purchasing & Supply Management, 2*(4), 153-163.

Velicer, W. F., & Jackson, D. N. (1990). Component Analysis Versus Common Factor-Analysis - Some Further Observations. *Multivariate Behavioral Research, 25*(1), 97-114.

Venkatesh, V., Brown, S. A., & Bala, H. (2013). Bridging the Qualitative-Quantitative Divide: Guidelines for Conducting Mixed Methods Research in Information Systems. *MIS Quarterly 37*(1), 21-54.

Verhagen, M. (2011). *Speech by the Minister of Economic Affairs, Argiculture and Innovation*. Brussels.

Verlet, D., & Devos, C. (2010). *Efficiëntie en effectiviteit van de publieke sector in de weegschaal*. Brussel: Josée Lemaître Administrateur-generaal.

Vestrum, I., & Ramussen, E. (2013). How community ventures mobilise resources: Developing resource dependence and embeddedness. *International Journal of Entrepreneurial Behaviour & Research, 19*(3), 283-302. doi: 10.1108/13552551311330183

VNG. (2015). from http://www.vng.nl

VNG Werkgroep gemeenten Amsterdam, A., Eindhoven en Leeuwarden. (2018). *Handreiking Social Return*. 's - Gravenhage: VNG.

Vogel, L. (2009). *Macroeconomic effects of cost saving in public procurement*. Economic Papers: European Commission.

Volker, L., & Meel, J. v. (2012). Dutch design competitions: lost in EU directives? Procurement issues of architect selections in the Netherlands. *Geographica Helvetica, 66*(1), 24-32.

Vosselman, E. G. J. (2002). Towards horizontal archetypes of management control: a transaction cost economics perspective. *Management Accounting Research, 13*(1), 131-148. doi: 10.1006/mare.2002.0182

Walker, H., Schotanus, F., Bakker, E., & Harland, C. (2013). Collaborative Procurement: A Relational View of Buyer-Buyer Relationships. *Public Administration Review, 73*(4), 588-598. doi: 10.1111/puar.12048

Wallace, W. L. (1971). *The Logic of Science in Sociology*. Chicago, IL: Aldine-Atherton.

Waller, D. L. (2003). *Operations Management a supply chain approach*. London: Thomsom.

Warnier, V., Weppe, X., & Lecocq, X. (2013). Extending resource-based theory: considering strategic, ordinary and junk resources. *Management Decision, 51*(7), 1359-1379. doi: 10.1108/md-05-2012-0392

Waverijn, G., Groenewegen, P. P., & de Klerk, M. (2017). Social capital, collective efficacy and the provision of social support services and amenities by municipalities in the Netherlands. *Health Soc Care Community, 25*(2), 414-423. doi: 10.1111/hsc.12321

Wei, J., Zheng, W., & Zhang, M. (2011). Social capital and knowledge transfer: A multi-level analysis. *Human Relations, 64*(11), 1401-1423. doi: 10.1177/0018726711417025

Weick, K. (1993). Collective mind in organizations: Heedful interrelating on flight decks. *Administrative Science Quarterly, 38*(3), 357-381.

Wernerfelt, B. (1984). A Resource-Based View of the Firm. *Strategic Management Journal, 5*(2), 171-180.

West, C., Stewart, L., Foster, K., & Usher, K. (2013). Accidental insider: Living the PhD study. *Collegian, 20*(1), 61-65. doi: 10.1016/j.colegn.2012.03.005

White, G. R. T., Parfitt, S., Lee, C., & Mason-Jones, R. (2016). Challenges to the Development of Strategic Procurement: A Meta-Analysis of Organizations in the Public and Private Sectors. *Strategic Change, 25*(3), 285-298. doi: 10.1002/jsc.2061

Williams, P. (2013). We are all boundary spanners now? *International Journal of Public Sector Management,, 26*(1), 17-32. doi: 10.1108/09513551311293417

Williamson, O. E. (1970). Corporate Control and Business Behavior. In N. P. H. Englewood Cliffs (Ed.): Prentice-Hall.

Williamson, O. E. (1975). Markets and Hierarchies: Analysis and Antitrust Implications: A Study in the Economics of Internal Organization. *Journal of Economic Literature Free Press, New York*.

Williamson, O. E. (1981). The Economics of Organization: The Transaction Cost Approach. *American Journal of Sociology, 87*(3), 548-577. doi: 10.1086/227496

Williamson, O. E. (1985). *The Economic Institutions of Capitalism: Firms Markets and Relational Contracting*. New York

Yan, T., Yang, S., & Dooley, K. (2017). A theory of supplier network-based innovation value. *Journal of Purchasing and Supply Management*. doi: 10.1016/j.pursup.2017.02.002

Ye, K., Shen, L., Xia, B., & Li, B. (2014). Key attributes underpinning different markup decision between public and private projects: A China study. *International Journal of Project Management, 32*(3), 461-472. doi: 10.1016/j.ijproman.2013.06.001

Yigitbasioglu, O. M. (2010). Information sharing with key suppliers: a transaction cost theory perspective. *International Journal of Physical Distribution & Logistics Management, 40*(7), 550-578. doi: 10.1108/09600031011072000

Yin, R. (2003). *Case study research: Design and methods* (Vol. 5). Thousand Oaks, CA: Sage Publication.

Yin, R. K. (2013). Validity and generalization in future case study evaluations. *Evaluation, 19*(3), 321-332. doi: 10.1177/1356389013497081

Yin, R. K. (2014). *Case Study Research: Design and Methods* (SAGE Ed. 5th ed.): Thousand Oaks CA.

Zacharia, Z. G., Sanders, N. R., & Nix, N. W. (2011). The Emerging Role of the Third-Party Logistics Provider (3PL) as an Orchestrator. *Journal of Business Logistics, 32*(1), 40-54. doi: 10.1111/j.2158-1592.2011.01004.x

Zelenbabic, D. (2015). Fostering innovation through innovation friendly procurement practices: a case study of Danish local government procurement. *Innovation: The European Journal of Social Science Research, 28*(3), 261-281. doi: 10.1080/13511610.2015.1056724

Zheng, J., Knight, L., Harland, C., Humby, S., & James, K. (2007). An analysis of research into the future of purchasing and supply management. *Journal of Purchasing and Supply Management, 13*(1), 69-83.

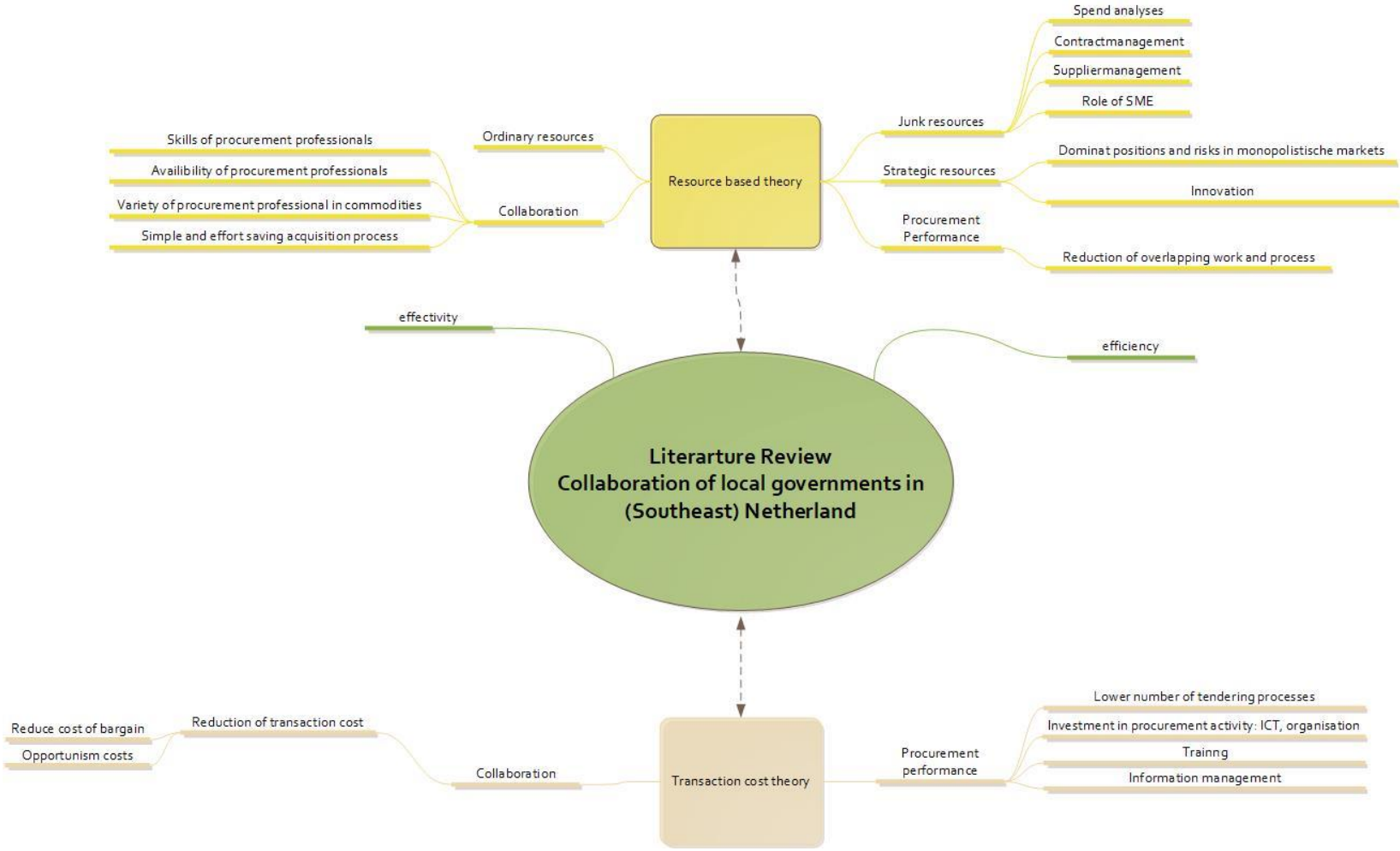
Zoeteman, K., Mommaas, H., & Dagevos, J. (2016). Are larger cities more sustainable? Lessons from integrated sustainability monitoring in 403 Dutch municipalities. *Environmental Development 17*, 57-72. doi: 10.1016/j.envdev.2015.08.003

Appendix I. Systematic Literature Review

Author	Topic area/ Country	Paradigm/ Method	Findings	Gap
Galaskiewicz (1985) **D'Aunno and Zuckerman (1987)** **Enthoven (1994)** **Dyer (1997)** **Essig (2000)** **Carlile (2002)** **Nollet and Beaulieu (2003)** **Guo and Acar (2005)** **Nollet and Beaulieu (2005)** **Tella and Virolainen (2005)** **Van Weele (2006)** **Marijn Janssen et al. (2007)** **Schotanus and Telgen (2007)** **M. Janssen and Joha (2008)** **Murray et al. (2008)** **Marijn Janssen et al. (2009)** **Trautmann, Bals, and**	- Collaborative procurement - Purchase consortia - Federations - Consortia - Boundaries - Purchasing groups, and Procurement, Structures - Cooperative purchase groups - SSC - Development of typology for purchasing groups - Identify critical management issues in the development of service-oriented arrangements. - A structural approach significantly different from the intra-organisational centralised/decentralised	-Action research (2) - Case-study (8) - Interviews (6) - Surveys (1) - Documents study (2) - Simulation model (1) - Literature review and theory synthesis (1)	- Mechanisms in public procurement by exploring tensions arising from collaborative procurement. - Legitimation. - Enhancing the possibility for majority stages research across federations. - Measure the symbiotic quality and quantity of consortia relationships. - Identify critical factors impacting the development of purchasing groups - The degree of formality of its collaborative activities when it is older, has more board linkages with other non-profits, and is not operating in the education and research or social services industry. -Framework used to help position by purchasing groups. - Cost savings largest motivation for cooperative purchase groups. -The level of trust, cooperation and	- Political and cultural influence - Refining testing federations - Instruments to establish symbiotic purchasing consortia - Extending internal boundaries, effects collaboration - As formalised collaboration among non-profits continues to intensify, more systematic research is needed to understand all these important issues associated with non-profit choice of collaboration forms. - Non-formalised needs more research of how to organise collaborative procurement. - More research in several disciplines. - Further, research in different local authorities in the Netherlands. - How can cooperative purchasing benefit small and medium-sized enterprises? - How to stimulate innovation in cooperative purchasing despite

Hartmann (2009) **Vogel (2009)** **Albano and Sparro (2010)** **Van de Laar (2010)** **Niehaves and Krause (2010)** **Schotanus et al. (2010)** **Schulz and Brenner (2010)** **Karjalainen (2011)** **McIvor et al. (2011)** **Levitt et al. (2012) Luzzini, Caniato, Ronchi, and Spina (2012)** **Pazirandeh (2012)** **Kastanioti et al. (2013)** **Walker et al. (2013)** **De Vries (2014)** **Meehan and Bryde (2014)** **Sartor et al. (2014)** **Sporrong and Kadefors (2014)** **Nehmelman (2015)** **Meehan et al. (2016)** **Richter and Brühl (2017)**	organisational models and the use of consortia. - Evaluate the impact of shared services, and in this way support their adoption. - Theoretically grounded purchasing portfolio model for global sourcing. - Macro economic research to effects of lower procurement prices. - Conditions under which centralised procurement may generate cost reduction to public administration. - Collective efficiency - UK (5) - US (6) - Japan (1) - Germany (1) - France (1) - Canada (2) - Belgium (1)		satisfaction increased between collaborating parties are leading to the initiation of an SSC. -Form and typologies of joint purchase groups. - Strategic, organizational, political, technological and economic dimensions are addressed in a systematic and structured way by joining a SSC -Highlighting of the emergence of a new structural model, procurement shared service in UK. -More comprehensive application of the purchase portfolio. -Reform of legislation and procedures that reduces profit margins in the procurement market can substantially reduce costs for the public sector. -Coordination and configurations are vital issues influencing SSCs' output. – Framework to explore relations between input, SSC and output. Finland (1) Netherlands (4) Italy (1) Overall (1)	decision making towards compromises? - What are the intensity, efficiency, and effectiveness of purchasing groups in the public sector? - Research of the benefits, drawbacks and risks of the SSC, and the findings need to be generalised by conducting comparative case studies. - The needs to academically adopt an incremental approach and also sets out suggestions for a strategic approach to shared services procurement strategy.

Appendix II. Mind Map Theories (Strategic and Economic)



Appendix III. Adapted formula of Costantino et al. (2012)

$$[\boldsymbol{ACPca} = \boldsymbol{Ce} + \boldsymbol{Cif} + \boldsymbol{Cis} + \boldsymbol{Cb} + \boldsymbol{Caw} + \boldsymbol{Cd}] \quad (1)$$

$\boldsymbol{Ce}$ = Equipping cost, costs to arrange the tender publication.

$Ce = Cc + Cf + Cs + Te$

Cc = Costs paid for assessment purchase committee.

Cf = Fixed costs for using national government system to publish announcement.

Cs = Hours costs of the administrative employer.

Te = Equipping time.

$\boldsymbol{Cif}$ = Information costs, costs which provide bidding firms with information on detailed tender.

$Cif = N * Cs * Tif$

N = Number of tenders.

Cs = Hours costs of administrative employer.

Tif = Average time by procurement professional to clarify tender details to each bidder.

$\boldsymbol{Cis}$ = Inspection costs to visit the outlets.

$Cif = N * Cns * Tis$

N = Number of tenders.

Cns = Hours costs rate of responsible employee for inspection.

Tis = Average inspection time per bid.

$\boldsymbol{Cb}$ = Costs to evaluate bids.

$Cif = N * Cs * Tb$

N = Number of tenders.

Cs = Hours costs of administrative employer.

Tb = Average evaluating time per bid.

$\boldsymbol{Caw}$ = Costs to formally contract the chosen bidder.

$Cif = N * Cs * Tb$

Cs = Hours rate costs of administrative employer.

Taw = Representing awarding time.

$\boldsymbol{Cd}$ = Costs to draft, approve and sign contract.

$Cd = Cs * Td$

Cs = Hours rate costs of administrative employer.

Td = Representing time for draft and approval of contract.

Appendix IV. Interview Transcript and generating of descriptive themes

711_0005	
Aantal minuten:	58
Aantal sprekers:	2
Taal:	Nederlands

SP1: Of ie nou loopt? Ja. 8 januari, interview met……

SP2: Ja, heel goed.

SP1: Dan leg ik hier wel op en dan eens even kijken. Had jij hier eerst nog wat vragen over, dat is misschien het makkelijkste?

SP2: Nee, ik heb er geen vragen over. Voor mij was de opzet wel helder hè. Zeker met de toelichting, die je nou hebt gegeven. Ook de relatie tussen, zeg maar inkoopsamenwerking, maar eigenlijk ook, zeg maar, bovenliggend gewoon samenwerken in zijn algemeenheid.

SP1: Ja, dat speelt dan, eigenlijk zou het mooiste straks zijn Rien, dat zeg ik ook al, heb ik al vaak gezegd, ik heb het op inkoop, maar als iemand nou dadelijk zou zeggen ik ga het eens op HRM bekijken dan moeten we het model ombouwen, dan moet dat kunnen. Dat is het mooie van het verhaal.

SP2: Want wat ik nu heb gedaan in de voorbereiding, is even naar aanleiding van de stukken heb ik voor mezelf gewoon opgeschreven, even van nou, wat zijn nou de belangrijkste aandachtspunten bij mij hè, gewoon als het gaat ook over de inkoopsamenwerking binnen het BIZOB-verband, welke dingen vallen mij daarbij op? Wat vind ik sterk? Wat vind ik eventueel risicofactoren, aandachtspunten? En zo heb ik er even naar gekeken, ik weet niet of dat de bedoeling was?

SP1: Ja, ja, heel graag, want ik heb dus zelf, die laat ik dadelijk wel bij jouw achter een aantal meetpunten gemaakt op basis van die 5 theorieën, dat is in het Engels, maar dat is voor jou geen probleem denk ik deze. Als jij die dan een keer eens door wil kijken, daarna nog, na het gesprek, want ik vul hem aan want geheid zitten daar dingen in die jij, die ik hier niet in heb staan, deze komen uit de literatuur.

SP2: Oké. Ja.

SP1: En het mooiste is vaak, dat de literatuur andere dingen, die heeft tekortkomingen ten opzichte van wat er in de praktijk gebeurt, en dat is net het interessante om achter te komen in dit verhaal. Dus ik geef deze tabellen alvast aan jou.

SP2: Ja, prima.

SP1: En dan ga ik dadelijk even wat dichten, wat schrijven, noteren.

SP2: Ja, je moet, we hebben Wi-Fi problemen.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP1: Ja, dat kan in Word.

SP2: Nee, dacht dat je misschien, want anders dan moet je even via hotspot. We hebben toevallig, gisteren hebben we wifi problemen, met de hele Dommelvallei, met de … (00:01:56) organisatie en er moet iets van hardware komen vanuit Amerika, dat is er pas vrijdagmiddag, ja, dus dat is nou vanmiddag, maar het speelt vanaf woensdagavond. Dus ik zit nou hier even via hotspot heb ik gewoon effetjes verbinding gemaakt.

SP1: Dat is wel lastig hè, want bij ons.

SP2: Nou wij hebben zelf wel gewoon, op de hardware hebben wij zelf wel gewoon verbinding, maar wij zitten even met wifi hebben wij problemen.

SP1: Met wifi in het gebouw.

SP2: Maar wij werken natuurlijk steeds meer al met, ja, mobiele devices natuurlijk.

SP1: Ja, ja, ja. Zullen we eens kijken wat jij hebt Rien, als jij eerst eens begint met jouw.

SP2: Nou ik had even ook aan de hand van de eerste bijlage, zeg maar, het overzichtsverhaal van de inkoopsamenwerking en dan vanuit, zeg maar, de effectiviteit en efficiency related aspecten. Had ik voor mijzelf even van nou, ik begon eerst even voor mijzelf bij die strategische visie van, hadden wij een visie toen wij, zeg maar, aansloten bij BIZOB hè, bij inkoopsamenwerking, nou dat, goed wij waren ook een van de eersten, zeg maar.

SP1: Ja, de eerste 10.

SP2: Ja, de eerste 10. Nou ik denk zelf dat we eigenlijk geen echte strategische visie hadden op de samenwerking bij inkoop. Dus, ik denk, daar zijn geen, d'r was geen strategische argumentatie eigenlijk van, nou het zat meer eigenlijk gewoon in de operationele doelstellingen en daar kom ik zo meteen nog wel effetjes ook op terug, maar dat is denk ik wel goed om te weten, want ik dacht dat ook wel dat even terug te lezen eigenlijk in de stukken hè van, is dat nou, ligt daar nou echt een strategische visie onder of is het toch meer de operationele doelstelling, ik denk dat dat bij ons ook zo was van, nou aan de hand van voorbeelden elders, zeg maar eventjes West-Brabant was dat.

SP1: Klopt.

SP2: Nou daar ben jij zelf, weet je natuurlijk alles van.

SP1: Daar was ik directeur, ja klopt, oprichter.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP2: Nou ja, zeg maar, het voorbeeld van elders en vervolgens spiegelen aan je eigen organisatie en als je dan ziet van nou, van wat je dan ziet aan tekortkomingen, aan aandachtspunten, aan verbeterpunten dan is gewoon de operationele doelstelling om daar verbetering in te brengen, dat was eigenlijk denk ik vooral leidend. Dus ja, het goeie voorbeeld spiegelen aan je eigen situatie en zien dat er gewoon verbeterpunten zijn en dan ook zien dat je dat gewoon als kleinschalige en kleine gemeente nou, zeg maar, die verbeterpunten niet zou kunnen bereiken zelfstandig. Dus dat is eigenlijk, denk ik, het belangrijkste punt en anders zitten we dan meteen onder ook, zeg maar, de, dat is denk ik wel goed van BIZOB, dat is ook een van de voordelen van het kunnen laten zien van de voordelen, dus, zeg maar, het goeie voorbeeld van West-Brabant dat liet ook zien van, dat gewoon, zeg maar, …

SP1: Ja, ja, ja.

SP2: … dat er ook voordelen te behalen waren, waardoor, zeg maar, het geloof in theorie, want dat gewoon door samenwerking, zeg maar, je ook zelf sterker kunt zijn als dat onderbouwd wordt met gewoon, zeg maar, praktijkinformatie waaruit blijkt dat dat inderdaad ook zo is dat versterkt het geloof in …

SP1: Omdat te gaan doen.

SP2: … om dat te gaan doen. Dus dat is denk ik gewoon een belangrijk punt.

SP1: Want wel sterk, zoals jij zegt, maar dat kun je natuurlijk ook terughalen op een van die theorieën is die core competence theorie en de resource theorie waarbij je zegt, van die

operatie wij hadden een aantal dingen, kwamen wij tekort en die zagen wij zeker dat wij die daar met zo'n samenwerking konden bereiken, aantal capaciteiten.

SP2: Ja, ja.

SP1: En dat is het vertrek geweest, niet omdat we strategisch we wilden dit met een groep gaan doen, nee, we hadden gewoon behoefte aan operationele invulling.

SP2: Kijk in zijn algemeenheid heb je natuurlijk van dat speelde ook al in, want wanneer is het BIZOB begonnen 2005?

SP1: 2003

SP2: 2003 al, oké, in zijn algemeenheid zie je natuurlijk dat dit in gebied is hè, Zuidoost-Brabant waarin samenwerking hè, zeg maar gewoon altijd een belangrijk aandachtspunt is geweest we hebben natuurlijk ook vanuit het verleden hè, de SRE, want daarvoor had je eigenlijk al, zeg maar, rondom regio Eindhoven had je natuurlijk op een gegeven moment de WGR. En je had in Kempenland, had je, zeg maar, een apart samenwerkingsverband, ze zijn op een gegeven moment samengegaan in het SRE, ja van oudsher is wel in deze regio is samenwerking en, zeg maar, de gedachte achter samenwerking en de voordelen die je daarmee kunt halen die zijn altijd wel, denk ik, ondersteund en die zijn ook behoorlijk uitgedragen, dus daarbinnen valt zo'n inkoopsamenwerking die valt wel in een redelijk, ja, warm nest, zal ik maar even zo zeggen.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP1: Dat klopt, dat herken ik als ik zelf dat vergelijk met West-Brabant dan herken ik precies wat je zegt, want Zuidoost-Brabant is zo ontwikkeld en waarom puur omdat de samenwerking en hadden veel meer al overleg in allerlei andere gremia en kenden elkaar al en in West-Brabant was het heel vaak ze zaten tegenover elkaar en ze kenden elkaar amper. Dat klopt

SP2: Dus dat zijn twee dingen die denk ik ook wel meespelen, sowieso dezelfde cultuur gericht op samenwerking, samen bij je sterker dan alleen en, ja, de operationele doelstellingen eigenlijk, of dus een klein beetje strategische visie zit er misschien onder, maar dan meer eigenlijk gewoon meer gebiedsgericht eigenlijk en minder op het taakveld zelf. Dus dat was even als opwarmertje. Ik heb even gewoon wat punten opgeschreven, enerzijds als je kijkt naar BIZOB, naar de inkoopsamenwerking, laat ik het even zo zeggen en dan eens kijk naar efficiency en effectiviteit dan zijn er eigenlijk wat andere dingen die wat mij betreft er wat uitspringen. Die noem ik maar gewoon eventjes, kunnen we het daar misschien even over hebben. Dat is gewoon, ja, eigenlijk, zeg maar, gewoon kwaliteit. De vraag is even nou van, kun je dat onder efficiency of effectiviteit terug laten komen, bij welke hoort hij dan hè.

SP1: Kwaliteit, ja, bij effectiviteit een beetje, ja precies.

SP2: Maar het speelt ook wel …

SP1: Ja, ja.

SP2: … bij efficiency, want daar kom ik zo meteen wel ook nog eventjes op terug, dat denk ik. Ja inkoopkracht, gewoon getalsmatig, maar ook speler op de markt. Hè dat zijn denk ik gewoon, heb ik eventjes punten opgeschreven voor mijzelf, maar als ik dan even dat spiegel naar ons zelf dan zeg ik, ja, we zijn zelf eigenlijk gewoon, de organisatie was te klein, we hadden het versnipperd, we hadden wel verschillende inkoopfuncties binnen onze organisatie. Die waren vaak gelieerd aan de inhoud en daardoor had je een versnippering, dus een grote diversiteit binnen je organisatie ook. Maar als je dan kijkt ook naar kennisvergaring, natuurlijk erg belangrijk is ook gewoon, als je kijkt naar de ontwikkeling van het aanbestedingsbeleid en als kleine organisatie, je hebt gewoon, zeg maar, een grote diversiteit in je organisatie maar ook een versnippering, ja, dan is het een feit, dan zie je vaak dat de praktijk leidend blijft in de uitvoering, en zeker wel een in de vorm dat een taakveld zich ontwikkelt en ingewikkelder wordt, complexer wordt door Europese regelgeving, ja, dan is het gevaar, van dat je gewoon, zeg maar, bij kennis vergaring en als kennisinstituut onvoldoende meegaat, en dus speler op, een goeie speler op de markt bent en dus vervolgens ook, als je kijkt naar fouten maken, verkeerd inkopen, kosten, risico, en dat soort zaken, nou ja goed, dus dan spiegel ik even mijn eigen organisatie, dan zeg ik van oké, dat zijn niet alleen voordelen van de inkooporganisatie, maar het is ook eigenlijk vermindering van die risico's in je eigen organisatie, daar zijn eigenlijk tegen … (00:09:07?).

SP1: Door die samenwerking kun je op een gegeven moment dat soort risico's beperken.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP2: Ja, ja, ja. Nou ja goed, wat ik zelf, moet ik even kijken hoor, ik heb net wat aantekeningen in dit stuk gezet, het loopt allemaal door elkaar heen. Wat ook een voordeel is van, nou van dat de efficiency, wat ik ook al even zei, voordeel van, bij de start ten opzichte van West-Brabant was, daar werd aangetoond, dat is toch vaak in een kleine organisatie het gewoon hard maken van het voordeel. Waardoor je dan ziet, van nou we hebben een investering, zeg maar, dit zijn onze lasten van, dat is inzet bijvoorbeeld van personeel en wat levert het dan op? Dat is vaak, dat is gewoon door de professionaliteit, ja, nou de professionaliteit van BIZOB heb je gewoon aantoonbaar, je kunt laten zien, je hebt lasten, dat zijn gewoon, zeg maar, de lasten zijn eigenlijk, je hebt een inkooporganisatie waar je gewoon deelnemer van bent, waar je gewoon kosten in maakt, maar tegelijkertijd ben je in staat om gewoon, ja, transparant te maken wat je baten zijn. Ja, dat is denk ik een belangrijk aspect.

SP1: Ja, zeker.

SP2: Ja, ik heb het er nog even bijgeschreven, nou ja goed, minder fouten. Ze heeft minder fouten, dus vind ik, denk ik gewoon dat heeft natuurlijk met professionaliteit iets te maken, met die kennisvergaring, dat heeft te maken met gewoon de kwalitatief maar ook kwantitatief, je kunt meer specialiseren, dat soort aspecten. Daar komt bij als je het in eigen beheer doet dan worden fouten, die ongetwijfeld gemaakt worden door, zeg maar, die tegen, die andere argumenten, ja, die komen vaak gewoon niet boven tafel, die zijn niet zichtbaar. Die blijven, zeg maar, gewoon in een soort van onderstroom zitten en die worden wel gemaakt, maar die worden vaak in een één op één situatie, een inkoper in je eigen organisatie die koopt in en die laat het resultaat zien en als er dan fouten in gemaakt worden, ja, dat komt, onvoldoende komt dat boven tafel. Dus dat zelf reinigende vermogen, dat kritisch naar jezelf zijn, zo allemaal, nou dat is in een professionele organisatie is dat denk ik, komt dat beter aan tafel. En je ziet ook van dat, en het voordeel daarvan is ook van dat je gescheiden functies hebt, en die gescheiden functie leidt ook, dat, zeg maar, de inhoud ook de inkoop controleert eigenlijk hè, dat is gewoon.

SP1: Het controleert elkaar beiden op deze manier en dat is heel sterk, dat klopt.

SP2: Ja. En terwijl als het weer in een hand zit, ik bedoel, we hebben bijvoorbeeld onze collega in Geldrop-Mierlo die hebben ook inkoop, zij doen ook veel inkoop zelf bijvoorbeeld hè.

SP1: Klopt.

SP2: Dat is, zeg maar, dat vraag ik mij altijd af van, ja, nou hoe zit dat met het vier ogen principe, laat ik heb maar even zo zeggen, maar bij ons in de organisatie je kunt het ook overdrijven hè, maar dat is, dat is, dat wordt ook door de accountant en ook op allerlei manieren wordt vier ogen principe, waarin je eigenlijk, zeg maar, gewoon kijkt naar een prestatielevering, en goed als je zelf je eigen prestatielevering moet controleren en daar kritisch op moet zijn, nou dan kun je de vraag stellen of dat dat. Dus dat vind ik een belangrijk aandachtspunt.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP1: Dat is een heel belangrijke, ja, die had ik ook niet zozeer uit de literatuur nog niet. Want die zitten echt nog niet 1, 2, 3, bij efficiency en effectiviteit.

SP2: Nee.

SP1: Maar dat is wel heel belangrijk natuurlijk vanuit transpar, ja, transpar, hoe heet het transparency, om het zo maar te zeggen, om daar de zichtbaarheid en die controle zou op een gegeven moment buiten je structurele accountancy, net wat jij zegt, om het ook op een natuurlijke manier georganiseerd te hebben.

SP2: Dan heb ik verder wat risico's voor mijzelf, die zitten ook vaak wel in een, gewoon in zijn algemeenheid in samenwerkingsverbanden. Wat wij bijvoorbeeld nou zelf hebben, wij hebben gewoon onze bedrijfsvoering, want ja we hebben inkoop eigenlijk op afstand gezet, laat ik het maar even zo zeggen, tenminste even verzelfstandigd die functie. Op veel grotere schaal hebben we natuurlijk bedrijfsvoering op afstand gezet bij de gemeenschappelijke regeling. Waarbij de filosofie is van, ja 't is toch van ons, zeg maar, de dienst over waar wij praten dan even over, wij konden daar, daar voelden wij toch wel een aantal risico's bij en die speelden ook wel een beetje bij BIZOB, daarmee kan ik ze ook even veralgemeniseren dus, zeg maar, dat is enerzijds op afstand plaatsen, daar kom ik zo meteen nog wel effetjes op terug. De tweede is eigenlijk, zeg maar, de professionalisering en de verzakelijking aan de ene kant versus, ja, zeg maar, wel bekend zijn met de cultuur van de organisatie, zeg maar, ja, couleur locale noemen ze dat, maar weten wat belangrijk wordt gevonden in een organisatie, weten hoe men omgaat met, waardoor, zeg maar, ja, die afstand. Daar moet wel een nabijheid zijn, je moet wel, ja, de dienstverlening moet wel klantgericht zijn. 't Moet wel, dus ook in die cultuur moet hij wel afgestemd zijn op de eigenheid van de organisatie, waarbij, ja, juist, zeg maar, een balans moet gevonden worden tussen die professionalisering, een spiegel voorhouden aan die organisatie en tegelijkertijd wel meenemen dat die organisatie eigenlijk graag … (00:14:08?)

SP1: Dat is wel heel interessant deze en ik denk dat, oké vooral dit, vooral meer speelt bij kleinere gemeentes.

SP2: Het zou kunnen, ja.

SP1: Gevoelsmatig dat blijkt straks wel. Maar is wel interessant, want de literatuur zegt daar niks over.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP2: Oké, oké, maar ik kan mij voorstellen dat jij het ook van anderen kent. Wat ik zelf vind dat is, zeg maar, wat mij ook wel opvalt, wat ik ook al wel terug krijg, is van dat, als je natuurlijk samenwerkt of binnen … (00:14:30?) het leidt natuurlijk wel tot overlegstructuren, tot afstemming en soms daardoor ook gewoon, ja, een wat stroperige, wat stroperige processen met langere doorlooptijden waarbij je snap je, waarbij je, zeg maar, kijk ik zal maar even een voorbeeld geven van, als wij, zeg maar, zelf iets rechtstreeks zouden inkopen bijvoorbeeld als het gaat over iets van personeel en we zouden zeggen we hebben vijf bureaus nodig, dat kan bij wijze van spreken over twee maanden kan het geregeld zijn. Het samenwerkingsverband moet natuurlijk toch, die moet het eerst ophalen bij alle deelnemers. Die moet vervolgens kijken van, nou ja goed, die moet vervolgens dus kijken van nou goed van zitten daar tegenstrijdigheden in, want die kun je niet op de markt zetten in een aanbesteding, dus je moet eerst, dan krijg je eerst het interne afstemmingsproces.

SP1: Algemeen maken.

SP2: Ja.

SP1: … (00:15:14?)

SP2: … (00:15:15?) ja. En dat is als je nou, zeg maar, daar als deelnemer tegen aan kijkt, en daar moet je eigenlijk, zeg maar, de eenvoudige beslissing moet je altijd voor lief nemen ten opzichte van de ingewikkelde beslissing, dus je moet eigenlijk, ik bedoel, van die afstemmingsprocessen ben je soms helemaal, heel eenvoudig opwerpen, je zou eigenlijk, als je het zelf zou doen had je er voordeel bij, dan zou je het sneller kunnen doen, risico's van verkeerde inkopen en zo zijn misschien over het algemeen wat kleiner, dus.

SP1: Nou dat zouden we eens kunnen uitwerken, want ik vind een heel mooi voorbeeld daarvan, die mail heb jij ook gehad, van die gezamenlijke indiening van personeel die is net gedaan. En dan zie ik die mail van Barry bij ons voorbijgaan, hartstikke goed, goed aangepakt, los van de inhoud, maar dan denk ik in één keer van wowowo wat moet er nog gebeuren, krijgen we een overleg? We krijgen helemaal geen overleg, een … (00:15:59?) erbij hè, want, zit jij ook erin?

SP2: Ja.

SP1: Ja, jij zat erin precies, d'r zit Joost zat erin en nog, dan denk ik van nou, tuig het eens allemaal op bij mekaar, dat is ook een beetje wat jij zegt nu.

SP2: En dan komen wij tot een afspraak, want ik heb nu inmiddels een stuk of 10 reserveringen al in mijn agenda en dan gaat er weer eentje weg, en dan zeggen ze kijk wat … (00:16:18?) dit was eigenlijk meer een soort van, ja, wij zijn meer als klankbordgroep eigenlijk bedoeld, nou ja goed op zich, die dag dat dus die mail kwam toen heb ik er even op gereageerd, nou dat vind ik eigenlijk wel leuk om.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP1: Nee, kijk kwalitatief, en dat is jouw eerdere punt geweest, denk ik zeker, ik sta er helemaal achter natuurlijk, daar gaat het niet om, maar als je er gewoon ook wetenschappelijk naar kijkt, en gewoon vanuit onafhankelijk dan kun je wel zo daar vraagtekens bij zetten.

SP2: Ja, ja.

SP1: En wat een raad heel gauw zal doen natuurlijk.

SP2: Ja, nou ook al omdat, zeg maar, dit is nou een onderwerp, ik bedoel, daar was ook wel reden waarom ik denk van, nou dat vind ik wel leuk om er even over mee te praten, ook hoe een andere collega ermee omgaat, dit is nou een onderwerp, dat zie je ook bij inkoop van personeel dat is natuurlijk al vaker gebeurd, waarin we altijd voorbehouden maken met betrekking tot de aanbesteding, waarvan we zeggen ze moeten altijd onze handen vrij hebben om een klant, dit is echt zo'n onderwerp waarvan je.

SP1: We hebben altijd specials die wij overal tussendoor moeten kunnen fietsen.

SP2: Ja. En dat gebeurt heel vaak, omdat je netwerk, zeg maar, snel kunnen reageren, ik heb nu een probleem, maar ik moet eigenlijk morgen dat is, je hebt bureaus, maar die bureaus, ja, die staan toch wel verder van je af, het gaat uiteindelijk in dit soort processen vaak toch om de persoon die je krijgt. Dat is, dat is bijvoorbeeld zelfs met de inkoop van projectleiderschap van grote projecten, daar zie je ook vaak, die balans tussen, zeg maar, tussen de prijs en de kwaliteit, dan zie je ook dat de presentatie van de projectleider, het goeie gevoel bij een persoon moet hebben die het uiteindelijk voor hem kan doen, want het verhaal van die bureaus, ja, wij hebben hier zelf, wij werken nou inmiddels met een ZZP-er in onze nieuwe wijk, maar die komt voort eigenlijk vanuit een aanbestedingstraject, dan zie je vaak, als voordeel wordt vaak gepresenteerd de backoffice van zo'n organisatie.

SP1: Van zo'n organisatie, ja dat wordt gezegd, ja, ja, precies.

SP2: Wij hebben kennis, en op het moment, hij staat er niet alleen voor hij kan terugvallen op, maar mijn ervaring is gewoon in die jaren geweest, is gewoon geweest van, nou ja goed, dat is zeer beperkt. En op het moment dat je echt gewoon, zeg maar, gebruik maakt van het backoffice, krijgen gewoon toch, dan begint men meteen te praten over de rekening.

SP1: Klopt, komt er weer bij.

SP2: En dan heb je wel eens dat je denkt bij jezelf, nou dan had ik liever die kennis weer elders ingekocht, bij wijze van spreken, 't is niet altijd een voordeel, want dan word je, eigenlijk heb je dan zelfs een vorm van gedwongen winkelnering. En dat is een beetje het punt van, nou dat vind ik toch wel aardig, maar dat is in de relatie met die stroperigheid.

SP1: Ja, ja, ja, zeker.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP2: D'r staat in de, ik weet niet precies waar die toe moeten leiden van inhuren personeel en als je dan dadelijk zou kijken van, goh wanneer de eerste mail is gekomen en wanneer we het dadelijk op de markt hebben gezet en wanneer het resultaat er is.

SP1: En wanneer het contract er is en wat daar dan uitkomt. Nou ik heb ook een heel leuk voorbeeld, wij hadden namelijk zelf, je weet, bij Eindhoven gaat het nu steeds beter bij ons, we hebben het verzoek zelfs liggen om heel het contractmanagement te doen voor het sociale stuk daar. Nou daar moeten we twee mensen volledig gaan leveren daarvoor en de voorman, dus we hadden ook echt zo'n inkoopbureau dat gespecialiseerd is in de werving van mensen, dat doen wij anders nooit, daar is voor het eerst op ingezet. Nou die komen met kandidaten aan, die kunnen bij ons koffie drinken en die kunnen weg. Dat was helemaal niks en dan denk je ook wel eens wat is dan de toegevoegde waarde van zo'n bureau in dit geval, en dat was hier dus niks. Maar dat denk je ook zijn wij zo kritisch, of zijn wij zo? En dat heeft er ook mee te maken en ik snap ook Barry met zo'n aanpak wel van dat ie, jullie wil kijken wat leeft er nou, en wij hebben allerlei functies, en hij heeft natuurlijk de special functies en hij heeft de gewone routine functies, maar alles kun jij toch niet helemaal coveren denk ik.

SP2: Nee, nee, nee.

SP1: En dan zal het misschien ook wel uit het overleg komen.

SP2: Ja dat zou kunnen, dat zou kunnen, kijk dit moet ook niet te lang voortduren dit zoeken naar die gezamenlijke agenda want anders had ik ook zoiets van nou ja, vanmorgen toevallig weer vier, vijf reserveringen gekregen, want ja ze zoeken naar die gemeenschappelijke datum, 't zal wel best zijn. Ja goed, kijk wij hebben natuurlijk allemaal volle agenda's.

SP1: Tuurlijk. Een keer zou ik zeggen voor te focussen en voor te brainstormen.

SP2: 't Is gewoon natuurlijk heel gemakkelijk om met mij een aparte afspraak te maken, maar op het moment dat je gewoon, ja, vijf, zes mensen, ja, dan is die gemeenschappelijkheid van lege plekken in je agenda, ja, …

SP1: Wordt lastig.

SP2: … dat hebben jullie natuurlijk ook, dus dat.

SP1: Ik ken het, ken het.

SP2: Dat waren even, in hoofdlijnen waren dit mijn opmerkingen Marcel. Was in de voorbereiding, ik denk van ja, toen ik het stuk had gelezen, ik denk van wat is nou daar spontaan voor mijzelf even zeg van nou van Peer verdeel nou gewoon de BIZOB strategie, nou daar hebben we het eerder over gehad, de voordelen van het spiegelen aan van tekortkomingen, even aan het spiegelen in mijn eigen organisatie en eventueel risico's die ik gewoon zien dat.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP1: Ja, als ik dan nog even terugpak naar die bijlage, als ik die dan even afpel. Nou die waarde heb jij eigenlijk ook al duidelijk aangegeven en dan zie je ook die kwaliteit, ja, oh ja, die valt bij mij een beetje onder die value hier, als we daar dan naar kijken zie jij dan ook bijvoorbeeld kwaliteit, en duurzaamheid, en dat soort zaken in inkooptrajecten zelf. Dat je zegt van nou we hebben daar bijvoorbeeld, pak maar iets, we hebben daar een MFA gerealiseerd en dat heeft toch echt wel tot betere kwaliteit gedaan, of als ze dat zelf hadden gedaan dan was er een bepaalde richting gekozen die.

SP2: Ja, nou wat je gewoon ziet is eigenlijk 't is niet altijd een voordeel, maar als ik bijvoorbeeld kijk naar het bestuurlijk 't aanbesteed, nou dat is, we hebben nou bijvoorbeeld ook bij het sociale domein hebben gedaan de Dommelvallei plus het gesprek aangegaan en nou ik bedoel dat is, ja, kijk dat is ook een nieuwe methode eigenlijk, laat ik het maar zo zeggen, tenminste voor ons gevoel.

SP1: Ja, dat is ook.

SP2: Dus dat is, als je dat nou ook al heel zou zeggen onder, ja, duurzaam, ik weet niet precies wat jij eronder verstaat die relatie met inkoop, maar wat ik wel merk is gewoon, van dat, zeg maar, dat zouden wij zelf niet hebben gedaan denk ik gewoon van, omdat je toch gewoon vrij snel terugvalt op je traditionele, ja, nieuwe procedures verwerken, procedureel hè dat was ook, wat ik straks even zei hè die kennisvergaring, zeg maar gewoon, zeg maar, nieuwe dingen zien, ja, dat wordt dat bestuurlijk aanbesteden. Bijvoorbeeld, dat is uiteindelijk niet doorgegaan, dat is uiteindelijk een heel slopend proces geworden, maar het aanbesteden van de Rooijseweg bijvoorbeeld bij ons, nou daar zijn we ook heel lang mee bezig, uiteindelijk doen we het nou gewoon op de traditionele manier, maar uiteindelijk vanuit ontwerp tot gewoon 't onderhoudt hè, is misschien voor een grote gemeente is dat gewoon, zeg maar, zoals wij al eerder echt bedacht hebben die zouden op tijd maar goed.

SP1: Die doen design and construct en dat hebben ze al vaker gedaan en dan gaat het gelijk goed en jullie doen het een keer en het leidt tot allerlei vraagtekens.

SP2: Maar, zeg maar, maar op zich gewoon, zeg maar, het er over nadenken, 't, zeg maar, de ondersteuning daarin, nou daar zijn gewoon wel kwalitatieve, zeg maar, bijdrages die je levert, die je normaal gesproken gewoon niet als je gewoon zoals je, of je zou ze toevallig net maar moeten inhuren.

SP1: Of pak die ZZP-ers even.

SP2: Dus in die zin kwaliteit en kwaliteit ook in de relatie met dus minder fouten maken en daarom legde ik even die relatie met efficiency als je meer naar de kostenkant kan goed daar effectiviteit daarom speelt kwaliteit eigenlijk speelt wat mij betreft gewoon eigenlijk breder.

SP1: Dat klopt, zeker die minder fouten maken draagt ook bij aan de kwaliteit, absoluut.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP2: Ja.

SP1: En dan had ik die tweede hier ook nog beschreven van, hoe kunnen nou die waarden die ik net noem zouden die ook door die structureel, zie jij ook dat die zaken, ja, eigenlijk zij het net ook al, doordat je structureel samenwerkt, want als je een keer een ZZP-er, of zo hebt die is weer weg hè. Daar zijn ook heel veel vragen over geweest en ook heel veel onderzoeken van, ja, men wordt afhankelijk van een ZZP-er, maar is zo weer weg, die gaat ergens anders naar toe, of whatever. Die tijd is vaak beperkt zo'n structurele samenwerking die is van jezelf die gaat door eigenlijk, tenzij je zelf de stekker eruit trekt maar dan moet het wel meer.

SP2: Daar zit een gelaagdheid in. Ik weet niet of je ons gesprek van een jaar of anderhalf geleden kunt herinneren toen hebben we het even gehad inderdaad over die structurele samenwerking wel in de rechtstreekse relatie tussen de inkooporganisatie en Son en Breugel.

SP1: Ja.

SP2: Waarbij ik toen heb gepleit voor, zeg maar, gewoon voor vastere.

SP1: Ja, ja, ja, zeker.

SP2: Voor vastere contacten, dus je hebt er een soort onderlaag, zeg maar, een basis laag van structurele samenwerking, dat zit in de organisatie, dat zit in het systeem, dat zit in de kwaliteitsverbetering, dat zit in de deskundigheidsbevordering, vervolgens heb je gewoon eigenlijk, zeg maar, de uitvoerende laag, en die uitvoerende laag zijn uiteindelijk de inkopers.

SP1: Klopt.

SP2: Zeg maar, en je hebt daarom is het wel heel mooi dat ISO-project met gewoon, zeg maar, collectieve inkooptrajecten en meer inkooptrajecten die eigenlijk, zeg maar, specifiek zijn, op de gemeente gericht. En kijk die structurele samenwerking bij de collectieve projecten moet je gewoon kijken naar dat neem je gewoon af als gemeente omdat je meedraait bij een totaal grote massa-inkoop. Daar waar het gaat om meer specifieke gemeentelijke inkoop is die vaste relatie ook erg belangrijk, dat weet je nog wel dat ik toen heb gezegd, luister van ik vind dat jullie te snel …

SP1: Wisselen.

SP2: … wisselen.

SP1: Ja, ja, klopt.

SP2: Daar zit eigenlijk die gedachtegang wel in van, nou van kijk maar jij bracht straks.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP1: Dat ben ik met jou eens, ja.

SP2: Plots straks maakte jij de opmerking, met de manier van samenwerken, structureel samenwerken, of gewoon, zeg maar, meer een lichtere vorm van samenwerken en daar ben ik wel, want dan kom je eigenlijk gewoon meer op de theorie van de wet gemeenschappelijke regelingen met de vormen van samenwerken. Je hebt gewoon de meest lichte vorm van samenwerking is van, ja, gewoon je hebt een onderwerp en je zoekt daarin een informeel, je hebt informele samenwerking en kijk dat is een beetje op dit moment nog, ja, mijn collega's zullen het mij niet in dank afnemen, de samenwerking tussen Best en Veldhoven, nou waarin je gewoon als je praat met anderen dan mijn twee collega's dan hoor je wel, dan zeggen ze helaas, ja, dat is toch nog redelijk diffuus en dat is toch nog, ik bedoel gewoon, wat moet dat nou precies opleveren en terwijl, ja, de meer, een hechtere samenwerking met een gestructureerde samenwerking daar denk ik van de voordelen van elkaar kennen, zeg maar, de cultuur van elkaar kennen, ook gewoon vaste protocollen hebben, procedures vast hebben liggen van nou, van wie welke rol en verantwoordelijkheden heeft, dat levert gewoon uiteindelijk in die samenwerking gewoon veel voordelen op.

SP1: Ja.

SP2: Nou dus dat is meer tussen gemeentes zelf, nou goed, dat kun je ook vertalen naar de samenwerking tussen een gemeente en BIZOB.

SP1: Ja, zeker, zeker. Maar dat is wel heel herkenbaar wat jij zegt ook een aantal punten van hoe die deskundigheid, die inkopers niet teveel wisselen, dat geldt ook voor managers, dat ze op een gegeven moment die structurele samenwerking dat is wel heel scherp, die heeft daar eigenlijk alleen zijn meerwaarde als we dat ook terug zien in de dienstverlening.

SP2: Ja.

SP1: 't Is van twee kanten, snap je? Dus dan moet je ook niet continu, want hoe herkent zich namelijk niet structurele samenwerking dat je andere gezichten ziet en dat je ook de levering

niet helemaal kunt veiligstellen van de resources die je wil ontvangen door die samenwerking, dus dan is het ook terecht dus dat de gemeente zo kritisch kijkt van wat ze geleverd krijgen in die samenwerking, zitten er vaste mensen op, zitten er protocollen op, wat jij zegt.

SP2: Ja, ja.

SP1: Ja, 't is wel interessant.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP2: Kijk je hebt ze eigenlijk, zeg maar, je hebt je inkooptraject hè specifiek, je hebt je inkooptrajecten collectief, en je hebt gewoon, zeg maar, je basisdienstverlening, want bijvoorbeeld wij hebben met Inge hebben wij afgelopen tijd, ja, ik vind dat zelf wel een leuk project, daarom ben ik er zelf ook af en toe gewoon bij betrokken. Daar hebben we gekeken van, nou hoe komt het nou dat in onze organisatie toch nog, zeg maar, te vaak de inkoopstrategieën, zeg maar, niet gevolgd worden en dan krijgen we uiteindelijk bij de rechtmatigheidscontrole van de accountants moeten we een inhaalslag doen. Dat hebben wij nou al twee jaar achter elkaar gezegd, goed dat gaan we verbeteren. Nou we hebben in de zomer, net vooraf aan de zomer en meteen daarna hebben we met Inge onder andere gesproken.

SP1: Dat zei ze ja.

SP2: Ja goed en toen hebben we gekeken van, nou van goh, en wij zijn daar nou ook zo'n beetje pilot gemeente mee, van nou van, hoe kun je nou veel beter in je organisatie waar, zeg maar, eigenlijk zo'n inkoopstrategie wat nou best wel een leesdocument is, hoe kun je zorgen dat dat gewoon een werkdocument wordt, waardoor gewoon, zeg maar, als je dat gewoon inbrengt in je adviesnota's gewoon in de dingen, in de voorbereiding dat je eigenlijk gewoon niet voorbij kunt gaan voordat je gewoon een aantal stappen moet nemen. Nou dat, ik bedoel, dat ziet er nou, dat is klaar eigenlijk nou hè. Dat gaan wij gebruiken en dat zal ook zijn effect hebben op, zeg maar, op de manier waarop wij weer gaan werken.

SP1: Ja precies.

SP2: En dat vind ik wel mooi, dat is echt zo'n voorbeeld van basisdienstverlening dat zouden wij zelf gewoon niet kunnen, nou jullie moeten het uiteindelijk toch gaan doen dadelijk voor alle deelnemers.

SP1: Dus hier kunnen wij meenemen, wat ze hier hebben gedaan kunnen ze in een andere regio dus ook gebruiken.

SP2: Nou dus je bent bereid om, zeg maar, gewoon in overleggen en in, zeg maar, iets voorbereiden om te investeren in één gemeente, omdat je het gewoon meeneemt ook naar een andere gemeenten, nou dat geldt ook weer omgekeerd, dus dat is wel echt een, dat zijn, dat zijn nou echt voordelen van de structurele samenwerking.

SP1: Ja, en die zijn echt ook op kwaliteit in de processen, daar worden processen dadelijk veel effectiever van en efficiënter, en dat is kwaliteit, want dan komt het toch weer in beiden terug kwaliteit, zowel in effectiviteit als in efficiëntie. Dat is heel interessant.

SP2: Nou ja, ik kan het natuurlijk alleen maar vanuit de praktijk vertellen, maar dat is wat je ziet gebeuren.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP1: Maar dat is ook de bedoeling, hè. Want het mooiste is dadelijk om te kijken van sluit nou ook het model aan bij de praktijk en waar kunnen we het dan bijschaven en waar hebben jullie er straks wel iets aan, dat is ook van belang. Even kijken naar de volgende Rien, of die nog, of we die al een beetje gecoverd te hebben? Ja jullie hebben het een beetje gehad over de guarantee en de internal processen, dus dan gaat het eigenlijk om het veiligstellen van die capaciteiten wat jij in het begin al aangaf. Zekerheid, onzekerheid, kun jij door samenwerking, heb jij meer grip, heb jij het idee dat jij door die inkoopsamenwerking met BIZOB of ook bijvoorbeeld … (00:29:55?) ook wel leuk om ze neer te leggen bij Nuenen en anderen dat jouw processen, dat je daar zekerder over bent dat daar minder hiccups inzitten dat je niet hebt van hé ik ben afhankelijk van, er is iemand ziek, of ik, mijn capaciteit staat onder druk omdat ik, worden daardoor beter geborgd.

SP2: Ja. Ja, dat is eigenlijk, zeg maar, kijk we hebben samenwerking, we hebben het even niet, ik had het ook niet echt genoemd, maar goed dat is natuurlijk wel een punt denk ik. Als je kijkt naar de doelstelling van samenwerken dan heb je dus, bijna heel Nederland hanteert bijna dezelfde doelstelling en soms zie je dan, zeg maar, of ook op regioniveau zie je dan ook nog een toegevoegde argumentatie, maar eigenlijk zie je gewoon, zeg maar, kwaliteit is natuurlijk een belangrijk argument, zeg maar, kostenbeheersing, soms kostenreductie, dat hebben wij bijvoorbeeld vaak als argument, maar de kwetsbaarheid dat is vaak gewoon, zeg maar, ik bedoel, vaak wordt via de vier K's, kwaliteit, kosten, kwetsbaarheid en kortere doorlooptijden, zeg maar eventjes hè, dat is dus, denk ik, dat soort zaken. Maar die kwetsbaarheid die is gewoon wel heel erg belangrijk en dat zal misschien in een grotere organisatie minder spelen, maar wel daar speelt heel vaak van, verkokering hè, dus dat is van, in feite van.

SP1: Tunnelvisies, hè.

SP2: Tunnelvisies inderdaad, waardoor je, zeg maar, eigenlijk ook gewoon kwetsbaar bent, kunt zijn op het moment dat iemand wegvalt, want dan kan een ander die kan het overnemen,

gewoon in de verticale kolom, maar veel minder in de horizontale kolom hè, want vaak zie je inkooptrajecten, die hebben vaak gewoon integrale aspecten.

SP1: Ja, dat is mooi te zien in Eindhoven nou, wat jij zegt hè.

SP2: Ja.

SP1: Maar daar zie je dus heel duidelijk, als ik daar even iets op mag doorzagen, je hebt die verticale kolom van sociale zaken, precies wat jij zegt heel het inkoop vindt daar plaats. Ze hebben daar een centrale inkoop nog zitten corporate, om het zo maar te zeggen, voor heel de gemeente, maar die heeft helemaal geen invloed in die verticale kolom van sociale zaken.

SP2: Dat is eigenlijk toch vreemd hè.

SP1: Ja, dat is heel vreemd.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP2: Dat is eigenlijk vreemd, je zou zeggen daar zitten toch bepaalde kwaliteiten en kennis ook van andere taakvelden die wel hebben te maken met het sociale domein die je eigenlijk mee zou moeten nemen.

SP1: Ja, absoluut. En dan gaan ze zelfs dat stuk, dat onderste stuk, gaan ze bij ons neerleggen, dus.

SP2: Ja. Nou kwetsbaarheid is eigenlijk gewoon, ja goed, kijk als je kijkt naar continuïteit, ja, ik noemde het straks even versnippering bijvoorbeeld in je eigen organisatie, natuurlijk weer andere termen die, zeg maar, ook kunnen leiden tot discontinuïteit en tot kwetsbaarheid. Dat ben je natuurlijk, ik bedoel, want wij hebben gewoon, zeg maar, ook de taakvelden hebben wij dus eigenlijk, bijvoorbeeld 1 FTE beleidsmedewerker of een beleidsuitvoerder en die gaat dat inkooptraject ook doen. Nou daar zitten die aspecten, wat ik straks zei hè, van vier ogen principe, van onafhankelijkheid, kritisch zijn op je eigen proces, maar ook gewoon je kwetsbaarheid, op het moment dat zo iemand wegvalt, ja, dan ben je je continuïteit in het proces kwijt. Dan moet je eigenlijk al gaan winkelen bij een andere organisatie, of een externe, nou ja goed, daar zit nou gewoon veel meer continuïteit in dus dat is gewoon gegarandeerd, dus dat is denk ik gewoon een belangrijk, maar die kwetsbaarheid die is gewoon minder.

SP1: Ja, vooral wat ik wel bij jou er echt duidelijk uit hoor is wel van, structureel zeker die meerwaarde zie ik, maar brengt het ook op de mensen niet teveel wissel, om het zo maar even heel pragmatisch, maar dat gaat eigenlijk, boven houden we ook die structuur aan in je

organisatie. En dat heeft met personeel te maken, maar ook met procedures, met alles, manier van werken dat dat ook niet elke keer verandert.

SP2: Nou, kijk jullie zijn natuurlijk, zeg maar, ook een, ja, een kennisinstituut, om het maar even zo te zeggen, tenminste zo zie ik het even ten opzichte van onze eigen organisatie, en ook al, zeg maar, wissel je regelmatig van de directe contactpersoon, of die directe inkoper hè, dan blijft die basis hè, van nou, want je bent als organisatie kwaliteitsinstituut, kennisinstituut, en zo zou ik willen, maar ook leverancier van vaardigheden, van inkoopvaardigheden, nou dat blijf je gewoon natuurlijk, maar daar zit die bovenlaag in, van dat dat ook herkenbaarheid moet zijn, een stukje continuïteit, dus daar zit een beetje spanningsveld tussen die verschillende onderdelen.

SP1: Jawel, maar ik denk zeker met die individuele trajecten willen ze een gezicht zien en dat kan ook twee of drie gezichten zijn voor werken en voor … (00:34:15?) maar dat zijn de gezichten.

SP2: Jullie hebben nou wat met meer … (00:34:18?) schaal hè.

SP1: Ja, zodat je ook die hele diepte in kunt gaan voor die vragen van, die bij de gemeente leven, alleen je moet niet elke keer een andere voor werk, of een andere voor dit, of.

SP2: Nee.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP1: Want dan kun je weer de vraag stellen over die structuraliteit, in hoeverre is die nou echt wordt die … (00:34:33?).

SP2: Dus eigenlijk, zou je kunnen, ik heb, het menselijk kapitaal van jullie zelf, van jullie eigen organisatie, of van een samenwerkings, of van inkoopsamenwerking dat blijft toch belangrijk, het is, het zijn protocollen, het is wet- en regelgeving, maar het is ook gewoon menselijk gedrag, 't is ook handelen, dus elkaar kennen, op elkaar kunnen inspelen, zeg maar, daarmee zit ook, zeg maar, andere aspecten die je net noemde, ja, dat blijft wel een belangrijk aspect om, zeg maar, die basis, wat leverancier, die basis dienstverlening die je eigenlijk hebt om die tot een goed product te brengen heb je wel het menselijk kapitaal nodig.

SP1: Ja. HRM is daar heel makkelijk in die kapitaal, met de mensen hoe zij het doen, moet je ze ook binden, en wij hebben gelukkig nog weinig verloop. Onlangs, misschien die ken jij nog wel is Ignas vertrokken, maar die heeft acht jaar bij ons toch gewerkt, een stuk of zes, zeven jaar. Dus dat kan een keer.

SP2: Die heeft ook bij ons gezeten.

SP1: Die heeft bij jullie gezeten daarom denk ik, ik haal hem maar even aan. Maar het is wel, ik herken het wel.

SP2: Ja.

SP1: En ik geloof, dat haal ik niet zozeer uit de literatuur, maar ik vind het wel, ik kan het wel plaatsen, dus dat gaan we zeker meenemen in het onderzoek.

SP2: Nee, maar het zelfde geldt voor, als je kijkt naar samenwerking tussen een shared service center en dat zijn jullie natuurlijk eigenlijk ook en de drie gemeentes. Ik merk gewoon we zijn nou ook de dienst Dommelvallei aan het evalueren. Voor mij is gewoon zelf al heel erg belangrijk, gewoon kijk, er is een basisorganisatie en die doet een aantal zaken, maar, zeg maar, de contactpersoon erin, die dicht bij je organisatie staan, die je kennen, de nabijheid, maar die ook weten van in elk geval wat er speelt in de gemeente, dat is gewoon vaak wel heel erg belangrijk om uiteindelijk een product ook gewoon op maat te hebben. En dat is bijvoorbeeld bij de dienst Dommelvallei, van zie je dat gewoon per taakveld verschillen, bijvoorbeeld op financiën daar komt een hele hoge mate van tevredenheid over, die hebben een vaste, hebben een vaste consulente, die overigens ook voor andere gemeenten werkt, maar wel gewoon, inderdaad ook die taakvelden hè, dan weet je wie je hebt, maar daarboven hebben we nog iemand die zich gewoon, zeg maar, die is voor, zeg maar, ja, de accountmanager, maar wel op inhoudelijk niveau voor de gemeente Son en Breugel, en dat is gewoon heel erg belangrijk. Die weet meer van de gemeente Son en Breugel.

SP1: Want die heeft het gevoel.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP2: Ja, die heeft het gevoel, hè die staat ook dicht bij het bestuur en bij het management, dat zijn dus meer de zachtere aspecten van samenwerking.

SP1: Kun je het niet een beetje vergelijken met Inge.

SP2: Ja, nou die heeft eigenlijk dezelfde functie hè.

SP1: Ja, dezelfde rol.

SP2: Maar goed, alleen daar is natuurlijk, de intensiteit daarvan is natuurlijk minder.

SP1: Ja, ja.

SP2: Maar dat is gewoon heel erg belangrijk, kijk in samenwerking zijn de, het gaat vaak om de harde factoren, maar eigenlijk zijn de zachte aspecten, zijn vaak veel belangrijker. Maar waar wij het net ook over hadden bij zo'n projectleider. Hè die projectleider daar moet je het goeie gevoel bij hebben, hè dus dan praat je over vertrouwen, dan praat je over van nou spreek je dezelfde taal, kun je je inleven in elkaars aspecten, nou dan zie je vaak, dat zie je vaak in samenwerkingsverbanden, zie je dat gewoon minder terugkomen, dat zie je vaak pas terug bij evaluaties, dan zie je vaak dat de zachte factoren gewoon gemist worden.

SP1: Ja.

SP2: 't Vertrouwen, kijk dat is ook met, ook op bestuurlijk niveau samenwerken van, waarom gaat de ene samenwerken, maar goed, we hadden al net een voorbeeld over Bladel en wat is er meer, waarom gaat het met anderen soms fout. Kijk als mensen op het hoogste niveau elkaar niet opzoeken en niet dezelfde taal spreken, of willen spreken, ja, dat is vaak een conflict, de basis hè voor het niet doorgaan van die samenwerking.

SP1: Dan verkrampt eigenlijk alles hè, om het zo maar te zeggen hè.

SP2: Ja. Dus dat is ook, dat zit ook in die vaste contacten hè, met jullie, met die inkopers hè, vanaf het moment dat het vertrouwen er is, ook de bekendheid, ja, gewoon, zeg maar, ja, inderdaad de, meer de cultuurfactoren, ja, die zijn wel wezenlijk.

SP1: Helder. Rien dan heb ik de volgende, dat vind ik ook nog wel even interessant, op kostenreductie hè. Merk jij nou echt in jouw begroting dat zo'n structurele inkoopsamenwerking dat dat ook een voordelige, of een nadelige, dat mag ook hè, zonder daar een waarde aan, maar heeft het effect op jou kosten? Of zeg jij van nou heel eerlijk gezegd zie ik er eigenlijk niks van, of?

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP2: Nou, wij zien dat wel, maar wij moeten wel echt moeite doen om het te laten zien. En dat heeft te maken met ook de manier van administreren binnen de gemeente, dat het. Je hebt, je hebt algemene ramingen, laat ik maar zo zeggen, soms zijn ze heel specifiek, je hebt algemene ramingen, je hebt eigenlijk. Aan de kostenkant is de inzet van BIZOB helder, d'r zijn een aantal dagen en die kun je precies herleiden. Met jullie manier van werken kun je de kostenkant, kun je helder maken. Vervolgens hebben we, op een project hebben we, zeg maar, een aanbesteding en daar zit een voordeel in. Dan is vaak is gewoon, wat zou het voordeel zijn geweest als je het zelf hebt gedaan? Dat wordt natuurlijk nooit eigenlijk duidelijk hè.

SP1: Nee, nee, dat moet je parallel laat lopen, synchroon hè.

SP2: Precies, dus degene eigenlijk die, zeg maar, denken dat ze het zelf kunnen die halen daar altijd hun gelijk. Hè die zeggen.

SP1: Want dan had ik zoveel.

SP2: Ik had het ook kunnen doen, of ik had het misschien nog wel beter gekund. Is niet toetsbaar, dus dat is een en twee is dat het gewoon, zeg maar, we kunnen het moeilijk, zeg maar, uiteindelijk kwantificeren gewoon uiteindelijk in de begroting weer aan de voorkant, wel aan de achterkant, bij de jaarrekening hè. De jaarrekening en daarom maken wij altijd in onze paragraaf bedrijfsvoering maken wij een apart overzicht van inkooptrajecten, dus laten we zeggen, van nou goed, wat hadden we geraamd en dat is vaak algemeen. Van wat is uiteindelijk de inkoop geworden en wat was het, de gemiddelde inkoop hè, waarin je eigenlijk kunt zien, van nou van goh, ze ramen een gemiddelde inkoop en wat is uiteindelijk de laagste dan en wat is je voordeel. Nou dat laten wij wel in onze …

SP1: Staat bij jullie in de jaarrekening?

SP2: In de jaarrekening, ja. Maken wij altijd een overzicht, wat hebben wij gedaan? Om, ja dat zijn natuurlijk een beetje boterzachte overzichten, maar die laten wel zien, van wat het effect is van de inkoopfunctie. Dus niet zozeer van de inkoopsamenwerking, maar alleen van de inkoopfunctie. En ja dan gaat het er vervolgens om dat wij ervan overtuigd zijn dat, met alle argumenten die ik net genoemd heb, dat gewoon, zeg maar, de kwaliteitsorganisatie die eronder ligt dat die een belangrijke bijdrage levert.

SP1: Daaraan heeft geleverd om dat te kunnen bereiken. Ja.

SP2: Ja, ja, ja. Zo op die manier verwoorden wij het. Ik weet niet of dat ik hier zo'n jaarrekening bij de hand heb, maar ik kan het je dadelijk wel effe laten zien, maar wij.

SP1: Zijn die openbaar, mag ik die?

SP2: Ja, ja, ja.

SP1: Ooh dat vind ik wel handig, wel prettig. Dus dan, ge kunt op een of andere manier toch, weliswaar zacht, kunt ge het aantonen en wat er voor wel is, is dus dan wel een uitdaging natuurlijk van, 't kost wel heel veel moeite om het te laten zien.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP2: Om te laten zien en dat heeft ook te maken met gewoon de manier van financiële verantwoording binnen je eigen gemeentelijke organisatie. Als je aan de voorkant helemaal

hebt gecalculeerd wat, en dat gebeurt natuurlijk wel, want we hebben wel projecten erbij wat we doen, dan zeggen we nou vandaag hebben we het op basis van kennis die we zelf hebben en de marktverkenning die we zelf hebben gedaan, zo is dit het bedrag wat opgenomen is in de begroting. En vervolgens heb je gewoon, zeg maar, de aanbesteding van het project en dan moet je het ook alleen maar enten op datgene waar je dan eigenlijk, zeg maar, ook van tevoren van hebt gezegd hier gaat het om, nou dan kun je kijken wat er onder aan de streep uit is gekomen, dan heb je natuurlijk nog, vervolgens dan heb je je aanbesteding en vervolgens krijg je gewoon van, in feite van, ja, is die aanbesteding zodanig van dat je ook precies krijgt in je aanbesteding wat je van tevoren hebt geraamd, want bijvoorbeeld het meer en minder werk.

SP1: Ja, ja, ja.

SP2: Dit zijn allemaal aspecten die het allemaal, net wat diffuser maken om eigenlijk precies de goeie vergelijking te maken. Dus wat wij dus in feite vaak willen laten zien wat de begroting, wat in de begroting stond en vervolgens laten we zien van, nou wat was eigenlijk het gemiddelde van de aanbestedingen, zo werken jullie zelf, of zo werken jullie, ja, …

SP1: Klopt, nee hoor klopt.

SP2: … en vervolgens laten we gewoon zien van wat het is geworden, gewoon in dit specifieke geval en dat geeft het inkoopresultaat, nou en dan is het gewoon, ja. Zeg maar wat meer die zachtere argumentatie van, nou ja goed, het geloof hebben dat we gewoon daar de samenwerkingsorganisatie bijdrage heeft geleverd, door de kwaliteit, door de manier waarop ze het hebben aangepakt en dat vertaalt zich dan, als we daar dan de kosten tegen afzetten.

SP1: Dat maakt het een stukje plausibel. Ja, ja. Maar als je dan even over die kosten doorgaat, want het kost natuurlijk ook geld zo'n inkoopsamenwerking, ook de Dommelvallei kost geld, levert het dan die kosten op? Zeg je dan van, ja, als ik het zelf had moeten organiseren dan was ik meer kwijt geweest? Los van de zekerheid en de.

SP2: Meer kwijt geweest, of het dan minder opgebracht.

SP1: Ja, ja.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP2: Wat meer kwijt, meer kostgeld dat denk ik niet, want omdat, maar dat heeft te maken met, zeg maar, die eerste argumentatie, over de versnippering, ja, jongens daar had je het waarschijnlijk gewoon nog in je eigen organisatie laten zitten bij de functie waar het zit. Kijk en wij betalen, denk ik op dit moment, iets van € 90.000 euro, of zo geloof ik, vier dagen, of zo,

goed, kijk dat is gewoon wel een FTE. Dus ik had er ook voor kunnen kiezen om, zeg maar, voor € 90.000 euro hier een FTE inkoop te kunnen doen, dan valt er een stukje van, hè, dat hadden we dus kunnen organiseren, wij hebben hier een aantal één mensfuncties wat specifieke staftaken, waarmee laat ik die dus dan staftaken zou noemen hè, wij hebben ook gewoon een jurist.

SP1: Maar het is natuurlijk wel zo, dan zou je een aantal dingen denk ik wel op die kennis en die zou je dan kunnen doen hè, want je kan die man binnenhalen, alleen ook het uitvoeren van die gezamenlijke trajecten die zijn natuurlijk ook, maken het goedkoper ook voor de lijn weer.

SP2: Nee, maar daarom kijk, zeg maar, …

SP1: Ik zit ook effe te denken.

SP2: … nee, maar daar heb je helemaal gelijk in, maar kijk er zijn dus meerdere redenen om, zeg maar, in zo'n inkooporganisatie om daarin deel te nemen aan zo'n samenwerkingsverband. Als je puur sec op de kosten praat dan zou je zeggen, oké goed, dat kost mij € 90.000 euro, daar had ik zelf een FTE voor kunnen doen, nou goed dan had ik waarschijnlijk ook wel een stuk van, van kwaliteit binnengehaald. Vervolgens heb je inderdaad te maken van, ja goed, daar zitten dan toch ook nadelen aan, kun je meten met collectieve inkoopproducten, nou wat gebeurt er, nou dan pak je het punt van kwetsbaarheid, wat als die man verlof heeft, of ziek is, of vrouw, van ja goed, dan moet je toch hè, dus je hebt geen achtervang. Dat soort dan, dan gaan andere argumenten die gaan spelen van, waarom dat je zegt, luister ik moet dit niet als een inkoop, niet als een één mensfunctie in je eigen organisatie organiseren, maar het haalt wat nadelen weg, een van die nadelen van dat het versnippert, dat er bijvoorbeeld één op één bij een, bij iemand zit die, zeg maar, en uitvoert, die voorbereidt, uitvoert, maar ook inkoopt.

SP1: Klopt.

SP2: Nou, dat kun je wel hè, een aantal negatieve argumenten haal je weg door het ook zelfstandig in je eigen organisatie te doen. Dat daar zijn we zo eerlijk.

SP1: Je hebt je vaste persoon altijd, noem het maar op.

SP2: Daar zijn voordelen van, maar de kwetsbaarheid bijvoorbeeld en, zeg maar, de kwaliteit in de breedte, het vormen van collectieve inkoop, meedoen met andere gemeenten, en zo.

SP1: Kennisuitwisseling, et cetera.

SP2: Kennisuitwisseling, nou 't zijn allemaal de argumenten die, zeg maar, niet gelden als je het zelf organiseert, nou ja, dat is de afweging.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP1: Ja, ja. Helder. Dan had ik nog een belangrijke, dat is eigenlijk die samenwerking. Ik haalde hem in het begin ook al een beetje aan. Een van de theorieën die zegt ook heel duidelijk, die agency kosten theorie van, als jij in heel veel samenwerkingen zit is het verrekte moeilijk, ik zeg het maar even plat, maar daar komt het op neer, om die samenwerking goed op elkaar af te stemmen. En daar gaat heel veel ineffectiviteit en inefficiency in zitten. Ik pak er even een paar hier, je hebt voor het sociaal domein een stuk Eindhoven, je hebt de Dommelvallei, je hebt een stukje BIZOB, je hebt hoe heet die club, de ODZOB hebben we nog voor een stuk zitten, we hebben de GGD nog voor een stuk zitten. Al die organisaties bij mekaar, los van dat het heel veel tijd kost om die te besturen, dat parkeer ik even, maar het heeft ook heel veel inefficiency in de uitvoering van trajecten.

SP2: Dat is ook zo.

SP1: Herken jij dat?

SP2: Nou dat is natuurlijk wel zo, maar dat is altijd een afweging tussen, zeg maar, kijk want het is heel gemakkelijk, om vanuit de veelheid aan samenwerkingsverbanden die er zijn te zeggen van, luister dat leidt tot een bepaalde inefficiency, dat is zo, want je hebt gewoon veel overleg, je hebt verloren uren, je hebt afstemming, je moet het met elkaar eens worden, dat af te zetten tegenover, ja, gooi het maar op één hoop, want dat is eigenlijk het alternatief. En dan raak je meteen in een discussie over, zeg maar, ja, gemeentelijke herindelingen en over van, ja, zou het goed zijn als we hier een grote organisatie zouden hebben voor heel de regio Zuidoost-Brabant, of bijvoorbeeld het stedelijk gebied. Ja dat is gewoon een bestuurlijke discussie en dan heb je toch te maken met gewoon heel andere argumenten. Die spelen van nou, maar die zitten meer gewoon, die zitten misschien minder in de efficiency van de organisatie, maar die zitten meer in de relatie met het maatschappelijk middenveld, met je eigen bevolking, met identiteit en dus, zeg maar, nou sec, zeg maar, bedrijfsvoering in organisatie van samenwerkingsverbanden. Nou we zeggen van, ja, daar gaat gewoon, daar gaat inefficiëntie, dat kan inefficiënt zijn, daar gaat gewoon energie in, daar gaat energie in die gewoon overbodig is in een aantal gevallen, maar daar staat veel tegenover en dat is, ja, is ook een, een democratisch politieke.

SP1: 't Levert veel op.

SP2: Ja. Het levert veel op en dan moet je misschien niet alleen altijd naar de organisatie kijken, maar ook kijken naar voor wie doe je het. Voor wie doe je het? En dat is misschien minder bij inkoop, maar meer bijvoorbeeld ik bedoel, ja, aspecten die ik net al noemde, het maatschappelijk middenveld, je nabijheid bij de bevolking, … (00:48:16?).

SP1: Dat zijn belangrijke punten.

SP2: Dus dat is, maar dat, zeg maar, de veelheid aan samenwerkingsverbanden dat leidt tot inefficiency, maar ook gewoon democratische controle bijvoorbeeld hè.

SP1: Ik heb een keer gekeken. Ik pak het er eens even bij, hoeveel ik er hier heb gehad.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP2: Wij zitten zelf in 35 samenwerkingsverbanden. Dus ik weet niet.

SP1: Dat had ik hier wel ergens zien staan volgens mij, maar 35 Rien.

SP2: Ja, ja.

SP1: Maar

SP2: Daar zitten ook een aantal, zeg maar, ja, BIZOB zit daar bijvoorbeeld bij.

SP1: Ja, die zit er ook bij hè.

SP2: Er zitten een aantal gemeenschappelijke regelingen bij, ODZOB noemde je net al, MRE, we zitten natuurlijk in Dommelvallei, in onze uitvoeringsorganisatie, GGD zit er natuurlijk, maar wij hebben bijvoorbeeld ook, zeg maar, een begraafplaats dat doen wij samen met een ondernemer. Dus je hebt gewoon, op allerlei terreinen heb je gewoon samenwerkingsverbanden.

SP1: Effe kijken hoor. Hier had ik een. Een aantal had ik niet naar jullie denk ik ofwel? Nee. Heb ik gewoon een paar gemeentes gekeken, bijvoorbeeld de gemeente Asten, die zat hier en dan heb ik ze denk ik lang niet allemaal, maar in de Atlantgroep, in de Blink, in de Brabant Water, in de Gemeenschappelijke Regeling, Peel 6.1

SP2: Ja. Als je gewoon naar de jaarrekening gaat van hun, daar hadden we het net over …

SP1: Daar staan ze allemaal in.

SP2: … daar heb je ook de paragraaf verbonden partijen.

SP1: Aah, dan moet ik daar eens even kijken. Dit was maar gewoon een eerste ideetje om.

SP2: Ik zal eens even, ik zal eens even, ik moet even nou, ik pak even de jaarrekening erbij.

SP1: Kijk want wat je wel zou kunnen doen natuurlijk, dat geeft die theorie ook een beetje aan, je zou veel meer aan de symmetrie kunnen gaan van die informatie, dat je daar iets gaat tussen organiseren.

SP2: Nou, daar zijn wij mee bezig …

SP1: Tussen die clubs hè.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP2: … voor een stukje, daar ben ik zelf de trekker van. Wij zijn bezig met de planning en control cyclus van de vier belangrijkste gemeenschappelijke regelingen, die dus eigenlijk ook gewoon democratisch worden aangestuurd, want jullie zitten natuurlijk toch het andere vormen, maar er zijn er vier, zijn er bij die alle 21 gemeentes bedienen, dat is de MRE, dat is ODZOB, dat is degene die je dus net zelf noemt en de Veiligheidsregio. En Harry Timmermans en ik zitten bijvoorbeeld in de adviescommissie bedrijfsvoering en financiën van de Veiligheidsregio, wij zijn ook benoemd hè de enige organisatie, de enige gemeenschap die dat heeft, behalve BIZOB dat is dan weer op een andere manier.

SP1: Andere manier ja.

SP2: Maar wij zijn er tegenaan gelopen dat wij, zeg maar, die wet gemeenschappelijke regeling is veranderd en waar wij nou tegen aanlopen is van dat wij eigenlijk, zeg maar, we krijgen dus 21 gemeentes, krijgen we kadernota aangeboden, krijgen een begroting aangeboden, krijgen een jaarrekening aangeboden, moeten wij zienswijzen ook in doen en vaak zie je dan dat op een aantal algemene uitgangspunten de gemeentes reageren, die reageren verschillend. Die reageren allemaal vanuit hun eigen invalshoek.

SP1: Dat zien we bij BIZOB al. Ja.

SP2: Ja. Dat heb ik als voorbeeld hoor, maar pak maar even bijvoorbeeld de ene, zeg maar, de GGD die zegt, bij wijze van spreken, nou onze prijsindexering, loonprijs indexering, is 1,5 zeg maar, even gemiddeld en de GGD zegt 1,4 de Veiligheidsregio zegt 1,7.

SP1: Maar wij hebben ook iets in de begroting staan. Nee, dat klopt.

SP2: Ja, ja. Nou ja en goed, en vervolgens gaat elke gemeente gaat daar naar kijken vanuit zijn eigen vertrekpunt, dus hun krijgen nog 21 zienswijzen. Nou wij doen dat, als Dommelvallei gemeentes met zijn drieën doen wij dat de laatste twee jaar vort samen. Zijn eigenlijk die afspraken om een onderwerp, dus wij houden, we hebben die vier regelingen, die hebben gemeentesecretarissen die de regeling hebben geadopteerd dat zijn koppeltjes van twee, dus ik doe het samen met Harry Timmermans, omdat wij sowieso … (00:51:39?) van twee, nou

goed. Dat was stap één en vervolgens hebben wij gezegd, luister van weet je wat we moeten doen, we moeten proberen, en daar moeten wij niet te ambitieus, te hoogdravend in zijn, maar we gaan proberen om een aantal dingen al op dezelfde manier te doen, en dat betekent uiteindelijk, en daar trek ik nou de kar van, dat doe ik samen met Ad Verbakel, ik weet niet of jij die kent, de concern controller van de gemeente Eindhoven en iemand van Dienst Dommelvallei, met … (00:52:00?) even over gehad.

SP1: Daar heb ik het laatst is over gehad. Ja.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP2: Dat zou wel kunnen. En binnenkort vindt het eerste gesprek plaats. We hebben met de vier directeuren gesproken, we zeggen wat vinden jullie ervan, die hebben dat binnen hun DB afgekaart. Van nou als we proberen op een aantal uitgangspunten zowel de planning en control cyclus komt het op hetzelfde moment, we hebben met de kadernota, wat is het karakter van die kadernota, en de uitgangspunten voor de begroting en de jaarrekening. Dus uiteindelijk zijn we die loon en prijsindexering, …

SP1: Ja, ja, ja, afstemmen.

SP2: … dat is een. Twee, vervolgens gaan we straks, de volgende stap zou zijn, zodra we het met elkaar eens worden, even overeenstemming over, zeg maar, bijvoorbeeld die weerstandsbeleid, over die risico's.

SP1: Dat is ook vooral discussie in BIZOB ook geweest.

SP2: Ja. Nou dat soort dingen, en je kunt die ene organisatie net zien anders dan anders maar dat is dan de volgende stap. En de laatste stap is, maar daarvan hebben wij allemaal even gezegd dat moeten wij nu even nog niet doen, want dat is meteen een bedreiging, is gewoon shared services. Ook kijken of dat je uiteindelijk gewoon, zeg maar, misschien via shared services ook nog tot een Shared Service Center zou kunnen komen, want waarom hebben nou die vier …

SP1: Ja, precies.

SP2: … GR-en die hebben ook hun eigen P&O.

SP1: En dat is eigenlijk een beetje. Ja, waar wij nou op terugkomen.

SP2: Nou, daar ben ik, zeg maar, ik ben daar de trekker van.

SP1: Dat is interessant.

SP2: Alleen al, kijken we over stroperigheid van processen, alleen al met die vier controllers.

SP1: Ja.

SP2: Zodra we de afspraken krijgen we hebben het gewoon al … (00:53:13?), maar dan zijn we wel bezig. We gaan dat niet doen, niet meer doen voor de begroting 2017, want de kadernota's van de organisaties hebben wij al gehad, nou we moeten wel klaar zijn, als we met de volgende kadernota.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP1: Vind ik wel heel interessant ook voor mijn onderzoek, omdat dat daar heel erg ook naar voren komt, je hebt dus die informatie die meer symmetrisch te gaan verlopen, nou wat jij al zegt, met zo'n Super Shared Services, of Central Shared Services eventueel, van dat we weer terug gaan naar de inkoop. SRE doet inkoop, of ODZOB biedt dingetjes aan, daar zit op een gegeven moment ook een overlapping in. De VRZLK, of de VRZOB dan niet, omdat daar helemaal geen … (00:53:48?) op zit, maar pak een andere, een GGD daar zitten ook nog twee, drie inkopers maar dingen te doen, ook eigenlijk indirect voor die gemeentes die eigendom zijn van BIZOB.

SP2: Het punt is natuurlijk wel, waar wij nou tegen aanlopen wel, in de eerste discussie die hebben we gehad van nou van, je hebt, dat speelt bij de GR-en heel sterk. Je hebt, zeg maar, je hebt de verticale kolom en daar de horizontale kolom. De GGD bijvoorbeeld hè, als we daar gaan praten over planning, control, dat is prima, maar als we het vervolgens hebben over verantwoording en over indicatoren bijvoorbeeld, dat gaat dan wel ver, die zeggen luister ja ho, maar wij hebben onze eigen kwaliteitscertificering en wij werken eigenlijk met andere GGD'en. Dus je moet als gemeentes, moet je ook wel oppassen dat je dus niet oplegt, je kunt niet alles opleggen, want je moet accepteren dat er ook een verticale kolom is in Nederland van kwaliteitsinstituten.

SP1: Kopen ze naar nationaal in. Maar je zou daar wel in kunnen kijken, want daar heb jij een punt in hoor, je hebt dingen die kopen zij lokaal in, je hebt dingen die kopen ze regionaal in en ze kopen ze landelijk in en eigenlijk in die drie en je zou kunnen zeggen natuurlijk voor dit stuk. Die GGD's zijn van die gemeentes die hebben structurele inkoopsamenwerking. Waarvoor hij dit nou, daar zitten twee mannen apart. En zo zijn er, dat kwam hier ook uit, dat is ook heel interessant natuurlijk om te zien dat jullie al in die gedachte vanuit financiën, want daar begint het toch wel eigenlijk met zo'n, ernaar te kijken.

SP2: Ik zal jou, dat is denk ik, ik zal jou dat memootje, dat is heel kort, we hebben er bewust voor gekozen om het gewoon allemaal heel kort te houden, en vooral eerst praten met elkaar over de intentie. En niet meteen, want daar zijn we allemaal erg goed in, om heel veel meteen op papier te zetten.

SP1: Ja, ja, ja.

SP2: Maar ik zal jou die, ik zal jou die memo stuur ik effe toe.

SP1: Dat is leuk.

SP2: Dat is eigenlijk, zeg maar, het vertrekpuntje even, daar staat verder geen geheime informatie in

SP1: Nou het is puur ook voor het onderzoek waar ik het voor wil hebben.

SP2: Maar dan heb je een beetje van, nou dat ligt ook in de lijn van waar we het nou over hebben, of over hebben gehad.

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

SP1: Hetzelfde geldt eigenlijk voor het stukje, maar dat staat daar los van, maar je hebt ook vaak dat je met die, wat wij zien, die vele samenwerkingen dat die doelstelling ook niet altijd gelijk loopt bij gezamenlijke inkopen. En dan merk je op een gegeven moment ook wel eens, en dat is een punt waarin je op een gegeven moment inefficiency krijgt, op een gegeven moment eigenlijk de Kempen, binnen de Kempen gemeentes zelfs al een gemeente heel iets anders wil dan de rest met het inkooptraject. En dat zijn ook nadelen waarin men op een gegeven moment kan zeggen, ja, ik ga het zelf doen. Pak maar een voorbeeldje, over een Reusel en Mierlo dan maar even die zaten heel erg op laagste kosten dat is ook best lastig met de begroting terwijl Bladel in dit geval zegt, ja, maar luister eens wij willen … (00:56:18?) als jij bent, dus dat mag, dat mag er een beetje mooier uitzien, die weg en die aansluiting, en dit en dat. Dan krijg je al dat die doelstellingen niet met mekaar vergelijkbaar zijn.

SP2: Die discussie hadden wij ook constant in het … (00:56:28?) dat gaat over die nieuwe wijk. Nou dat ben ik zelf gewoon, ik heb een hele bedrijfsvoering achtergrond dus de afgelopen jaren heel vaak, vanuit de crisis hebben wij vaak discussie gehad, maar we hebben natuurlijk volop aanbiedingen gekregen van projectontwikkelaars. Wij hadden daar een mooi stukje grond liggen, mooie wijk, als we de prijs maar wat verlaagde, maar dan zie je binnen ons college was er ook, maar ook wel inderdaad toch een stroming die zegt, luister ho kwaliteit. Wij zijn Son en Breugel, en wij zitten in het groen ruim opgezet en dan wil je niet dat je over, zeg maar, over 15 jaar zegt van goh hé, ja, die wijk is gebouwd in de crisistijd 2010.

SP1: Ja, ja, ja, dan heb je wel je hele leven er last van.

SP2: Terwijl als je meer naar de centen kijkt. Nou ik zat zelf wat meer op de lijn, van ja goed, maar we hadden al behoorlijk wat af geraamd en zo, afgeboekt en zo, ik zeg van nou moeten we onderhand toch, nou dus ik was wel voor wat verdichting, natuurlijk altijd nog een beetje op de Son en Breugelse maat, maar dat is, dat waren heel interessante discussies.

SP1: Dat is heel interessant ja.

SP2: Die heb je daar natuurlijk ook tussen.

SP1: Ja, ja, ja, precies en dat merken wij met die gezamenlijke trajecten ook vaak wel. En als je daar niet duidelijk van tevoren, die goals, die doelstellingen met mekaar ook gecentreerd afstemt dan heb je er heel veel last van in het traject. Maar dat herken ik wel.

SP2: ik heb om half elf een gesprek met twee wethouders. 't Was toch wel af hè.

SP1: Dan zet ik hem uit als jij het goed vindt

SP2: Ja, is goed. Ik laat heel effen zien of dat ik snel.

(00:57:48)

	RBT sources		TCT cost control
	RBT risk sources		RBT relation LAs
	TCT SCP		

Appendix V. Operation Scheme

THEMES, DIMENSIONS, SEMI-STRUCTURED INTERVIEWS

Introduction

In chapter 3, the relation between Structural Procurement collaboration and collaborative advantage had been established. Focus on the joint relationship between local governments.

Earlier, in chapter 1 and 2 has been argued the occasion of the two theories and expectations, which may improve procurement performance by local governments through structural collaborative procurement. By the conducted hypothesis in chapter 3, will be researched if these hypotheses in the researched business environment will be accepted or rejected.

In the qualitative approach will identify the items, key performance indicators. Once the key indicators have been recognised in the qualitative element, a quantitative will be used to utilise statistical techniques to generalise. Creswell described this method as ‘dominant – less dominant’ design. In this study, a dominant-less dominant design will be applied with the emphasis being on the quantitative instrument (structural questionnaire) over the qualitative semi structured interviews.

Theoretical Foundation: Structural Collaborative Procurement is a tool to achieve more value for local governments.

In chapter 4 will be researched more specifying the explanatory of this model, sourced by the two theories, that respects this theoretical funding in the ‘reality world’ of local government organisations in the Netherlands.

In the table bellows are those advantages diverted off the theories of the literature, further defined and operationalised in dimensions, items and collected with key performance indicators. The objective of item generation is to achieve the content validity of constructs by reviewing literature (Chapter 2) and consulting with local government experts. The dimensions are reviewed, out of the extensive literature, which involve the procurement performance of the organisation by collaboration.

These characterises will be discussed with experts of the local government organisations. These experts are Chief Financial officers (CFO’s), Chief Executive officers (CEO’s), Chief Procurement officers (CPO’s), and one mayor. All these experts are willing to take part in the focus group. The goal of the focus group is to check the collected item generations out of the literature, with the relevance and clarity of each item of the theories with the practical business environment.

Economical theory	Performance Measuring	Dimensions	Item	Key Performance Indicator	Examples	Measuring
Resource Based Theory	Effectively	Resource sharing	Our local government organisation use cross organisational teams structural for process design and improvement	- Number innovative procedures - Number of improvement projects	E-actions, click mini tenders, Design & Construct & Maintenance, Product development integrated in Procurement contracts	- Semi structured interview - Survey
Resource Based Theory	Effectively	Resource sharing	Our local government organisations have access of dedicate personnel to manage the collaborative process	- Number of collaborative procurement projects	Insurances, human flex-resources, energy, telecommunication, traffic signs, Dust collection, Students transport, health-care	- Semi structured interview - Survey
Resource Based Theory	Effectively	Resource sharing	Our local government organisations have access of professional procurement specialists to manage individual procurement projects	- Number of procurement projects executed by professional procurement specialist.	Each individual procurement project, public real estate, multi functional, IT hardware	- Survey
Resource Based Theory	Effectively	Resource sharing	Our local governments share technical knowledge	- Number of external hiring of experts	Sewerage, public lightning, transport, health-care	- Survey
Resource	Effectively	Resource	Our local government	- Number of innovative	Collection dust 3	- Survey

Economical theory	Performance Measuring	Dimensions	Item	Key Performance Indicator	Examples	Measuring
Based Theory		sharing	organisations have more advantages to product/technological developments	products, services and works.	compartments in one vehicle, order systems, catering, cleaning services, health-care	
Resource Based Theory	Effectively	Resource sharing	Our local government organisations have better relationships with suppliers	- Number of complaints about performance suppliers - Additional costs	Willingness to do more for the same conditions in the contract	- Survey
Resource Based Theory	Efficiency	Resource sharing	Our local government organisations share equipment (network, IT, computers)	- Number of procurements systems. - Costs per procurement project	Tenderned, Negomatrix and Bizob information system	- Documents - Semi structured interview - Survey
Resource Based Theory	Efficiency	Resource sharing	Ours local government organisations pool procurement and no procurement resources (training, time, money, e.d.)	Procurement hrm cost per turnover local government organisation	Allocating technical knowledge between local government organisations in the same SCP	- Semi structured interview - Survey
Resource Based	Effectively	Resource sharing	Civil servant of local governments are	Number of project plans and time schedule	Business working approach in public projects	- Semi structured interview

Economical theory	Performance Measuring	Dimensions	Item	Key Performance Indicator	Examples	Measuring
Theory			indirectly trained in business skills of the collaborative procurement organisation			- Survey

1	Performance Measuring	Dimensions	Item	Key Performance Indicator	Examples	Measuring
Resource Based Theory	Effectively	Resource dependence diminishing	Local governments share/get access to critical procurement knowledge, expertise and resources	Number of experts per commodity in the collaboration region	Allocation of knowledge and responsibilities: Dust management, sewerage management	- Semi structured interview - Survey
Resource Based Theory	Effectively	Resource dependence diminishing	Local governments have more buying power to strategic contract terms	Consolidated spend related to the individual spend	Collaborated joint procurement projects	- Semi structured interview - Survey
Resource Based Theory	Effectively	Information asymmetry	Local governments have awareness of the demands	Variety between specification of products of services	Preference for technical systems	- Semi structured interview - Survey

1	Performance Measuring	Dimensions	Item	Key Performance Indicator	Examples	Measuring
Resource Based Theory	Effectively	Information asymmetry	Local governments have more control over information/position in the communication flow	- Number communication documents. - Response rate	Information and single point communication	- Documents - Semi structured interview - Survey
Resource Based Theory	Effectively	Information asymmetry	Local governments have more information/knowledge of the supply market	Number market analyses	More structural up to date information and experience available	- Survey
Resource Based Theory	Effectively	Information asymmetry	Transparency of information	Number of legal objections	Information and single point communication	- Semi structured interview - Survey
Resource Based Theory	Effectively	Demand share	Local governments have more competitions/more buyers available	Number of procurement expert related to spend	Exchange and availability of procurement experts	- Semi structured interview - Survey
Resource Based Theory	Effectively	Demand share	Local governments have together more	Individual spend related to the collaborative spend	Consolidated spend	- Semi structured interview

1	Performance Measuring	Dimensions	Item	Key Performance Indicator	Examples	Measuring
			volume in the market			- Survey
Resource Based Theory	Effectively	Reputation	Local governments uses the legitimacy	Number of references to the collaborative organisation in business documents	Internal business documents	- Survey
Resource Based Theory	Effectively	Reputation	Local government hitchhike with collaborative brand	Acquaintance in the market	Branch organisations of Local suppliers and national government	- Survey

Economical theory	Performance Measuring	Dimensions	Item	Key Performance Indicator	Examples	Measuring
Transaction Cost Theory	Effectively	Goal synchronisation	Local governments have agreement on the procurement goals and strategy	Number of plans	Long term collaborative commodity plans	- Semi structured interview - Survey
Transaction Cost Theory	Effectively	Goal synchronisation	Local governments have agreement on the role of collaboration in the procurement processes	Cycle time of collaborative procurement project	The cycle time to achieve a desired output in collaborative procurement project	- Semi structured interview - Survey

Economical theory	Performance Measuring	Dimensions	Item	Key Performance Indicator	Examples	Measuring
Transaction Cost Theory	Effectively	Goal synchronisation	Local governments make use of participation in few collaborative organisations for procurement projects	Number of (external) organisations for procurement	Affiliated public (pps) organisations with insourced procurement organisation. For example: environment, health care, taxes, fire department etc.	- Semi structured interview - Survey Documents
Transaction Cost Theory	Effectively	Goal synchronisation	Local governments make use of a central organisation for procurement in the region	Number of central agencies for procurement	Agency Rijk, Bizob, etc.	- Semi structured interview - Survey
Transaction Cost Theory	Effectively	Goal synchronisation	Local governments agree that the individual goals can be achieved through working toward the goals of the procurement processes.	- Number of uniform strategic policy documents - Number collaborative procurement projects -	Commitment, formal and acting	- Semi structured interview - Survey
Transaction	Effectively	Transparency of	Local governments	Consolidated procurement	Annual procurement plans	- Semi structured

Economical theory	Performance Measuring	Dimensions	Item	Key Performance Indicator	Examples	Measuring
Cost Theory		information	jointly layout collaboration implementation plans to achieve the goals of the procurement function	plans		interview - Survey
Transaction Cost Theory	Effectively	Transparency of information	Joint development of demand forecasts related to the market (demand/supply)	Central forecast plans	Follow up system for allocating the supply of the market in health market	- Survey - Semi structured interview
Transaction Cost Theory	Effectively		Joint resolution on forecast exceptions	Number of exceptions or modifications	Demand allocating in the health market	- Survey - Semi structured interview
Transaction Cost Theory	Effectively	Transparency of information	Local government structural consulting about procurement policy	Number of formal strategic meetings	Strategic meeting about procurement policy	- Survey - Semi structured interview
Transaction Cost Theory	Effectively	Transparency of information	Joint plan about product-services, works commodities	Central procurement plan for a region	Central tactical procurement plan	- Documents - Survey
Transaction	Effectively	Transparency of	Laws and regulations	Central agency for procurement	Joint legal procurement	- Survey

Economical theory	Performance Measuring	Dimensions	Item	Key Performance Indicator	Examples	Measuring
Cost Theory		information	for local government strategy and mandate	law and regulation	department	- Semi structured interview

Economical eory	Performance Measuring	Dimensions	Item	Key Performance Indicator	Example	Measuring
Transaction cost theory	Efficiency	Procurement organisation cost reduction	Minimising of transaction costs in the sourcing phase	Cost rate per procurement demand	No or limited procurement costs	- Documents - Survey - Semi structured interview
Transaction cost theory	Efficiency	Procurement organisation cost reduction	Minimising of transaction costs in the supply phase	Cost rate pro procurement contract	No or limited procurement costs	- Survey - Semi structured interview - Documents
Transaction cost theory	Efficiency	Minimising of procurement management costs	Minimising of procurement management costs	Management costs pro procurement contract	No or limited procurement costs	- Documents - Survey - Semi structured interview
Transaction cost theory	Efficiency	Procurement Information	IT-costs for execution of the procurement	IT costs per procurement contract	No or limited procurement costs	- Documents - Survey

Economical eory	Performance Measuring	Dimensions	Item	Key Performance Indicator	Example	Measuring
		costs	processes			- Semi structured interview
Transaction cost theory	Efficiency	Procurement human resources	Number of independent procurement experts Number of independent technical experts	Costs of external independent experts pre procurement tender	Central function (project or/and technical) for collaborative organisations	- Auditing - Survey
Transaction cost theory	Efficiency	Procurement human resources	External-independent costs of legal knowhow of procedures or contracts	Costs of external legal independent experts pre procurement project	Central function (legal) for collaborative organisations	- Semi structured interview - Survey
Transaction cost theory	Effectively	Procurement process	Re-establishing of public tender costs	Costs of re-established tender per tender	Caused by failures in the tender procedure	- Survey - Semi structured interview
Transaction cost theory	Effectively	Procurement process	Costs arising from the delay in implementation of	Delay costs per tender	Establishing of project.	- Survey - Semi structured interview

Economical eory	Performance Measuring	Dimensions	Item	Key Performance Indicator	Example	Measuring
			public contracts			
Transaction cost theory	Effectively	Procurement process	Cost of lawsuit	Lawsuit costs per tender	Lawsuit costs	- Survey - Semi structured interview
Transaction cost theory	Effectively	Standardisation	Uniformity in the demand and specification	Number of product or brands characteristics:	Standardisation in specifications, quality standards, after-sales requirements	- Survey
Transaction cost theory	Efficiency	Standardisation	Uniformity in the Human resources	Number of standardized personnel characteristics	Standardisation in organisation and profession skills of staff and management of staff	- Survey
Transaction cost theory	Efficiency	Standardisation	Uniformity in the procurement process	Standardised procurement process for sourcing	Standardisation in research on potential suppliers, supplier selection, negotiation and contracting.	- Survey
				Standardised procurement process for supply	Standardization in evaluation and follow-up	

Economical theory	Performance Measuring	Dimensions	Item	Key Performance Indicator	Example	Measuring
Resource Based Theory	Effectively	Value	Introduce new services to citizen more rapidly	Number of (innovative) product development	Collecting dust	- Survey - Semi structured interview
Resource Based Theory	Effectively	Value	Introduce flexibility to political or citizen demand	Number of unexpected, not planned demand	Take care of refugees	- Survey - Semi structured interview
Resource Based Theory	Effectively	Value	Faster delivery of services to our citizen	Number of realised projects	Surplus of realised projects	- Survey - Semi structured interview
Transaction Cost Theory	Efficiency	Value	Increase lower costs	Lower procurement costs	Reduction of costs out of the procurement function	- Documents - Survey
Transaction Cost Theory	Efficiency	Capabilities	Focus on core activities	Number of questions in the tender procedure	Higher level of specifications	- Semi structured interview - Survey
Transaction Cost Theory	Efficiency	Capabilities	Improves (procurement) management processes	Number (and availability) and scope of central procurement management IT system	Central procurement management IT system	- Survey - Semi structured interview
Resource	Effectively	Value	Increases innovation	Number of innovative products,	Digital library IT system	- Documents

Economical theory	Performance Measuring	Dimensions	Item	Key Performance Indicator	Example	Measuring
Based Theory				services and infrastructural works		- Survey
Resource Based Theory	Effectively	Capabilities	Reduces (procurement) organisational risks	Time registration	Consistent in procurement function capacity	- Documents - Survey
Resource Based Theory	Effectively	Capabilities	Improves strategic position	Time registration	Direct on call and available of procurement management	- Survey - Semi structured interview
Resource Based Theory	Effectively	Capabilities	Get rid of problem functions	General organisation policy	Outsourcing or insourcing of procurement function	- Survey - Semi structured interview

Appendix VI. Themes content of Interviews.

The Dimensions of Resource Sharing divided into Themes

Interviewees / Themes	A	B	C	D	E	F	G
Access to Expertise/ Knowledge	- Necessary for small organisations. - Persons in operations - Basic procurement service - Organisational service	- Necessary if products and services are too diverse - Civil servant is too generally skilled	- Necessary for small organisations.	- Necessary especially at the start. To develop a fundamental procurement attitude	- Necessary especially at the start. To develop a fundamental procurement attitude	- Necessary for small organisation.	- Category management
Access to capacity	- Constant contacts; not to change too much from the seconded procurement expert - Relationship with procurement experts	- Continuity of skilled experts	- Continuity of skilled experts	Civil servants have learned from professional procurement experts, nowadays yourselves	- Continuity of skilled experts	- Continuity of skilled experts	Public SSC are sluggish and Bureaucratic: not agile
Access to	- A lot of meetings	- Professionalism	- Procurement	- Professionalism	- Professional-ism	- Profess-ionalism	- Safety category

Interviewees Themes	A	B	C	D	E	F	G
dedicated personnel to manage the collaborative processes	and correspondence and sluggish processes	expertise	connects collaborative projects	expertise - Secure interest of LA	expertise	expertise	national purchase groups - Facilities product/ services purchase groups at the regional level - Gather all the necessary competencies
Sharing experiences	- Interesting to evaluate how other LAs handle EU procedures	- Role of collaborative procurement organisation? - Switchbox: Network organisation - Civil servant insufficiently empowered by Bizob skills			- Civil servant sufficiently empowered by Bizo skills, especially collaborations skills	- Share material experts of LA in joint purchase groups: empowers quality	- National and regional level LA organisation uses standard documents of SCP
Cross-organisational teams for process design and improvement	Pilot for one LA then available for each member					Pilot for one LA then available for each member	

Interviewees Themes	A	B	C	D	E	F	G
Quality **Access to dedicated personnel to manage the collaborative processes** **Resource sharing**	More quality in the procurement function Visible in the LA organisation	More quality in the procurement function Visible in the LA organisation	More quality in the procurement function Visible in the LA organisation - Sharing of technical experts	More quality in the procurement function - Limited sharing experts, only from Helmond - Innovation out of ideas of individual organisation - Learning from Bizob experts	More quality in the procurement function Visible in the LA organisation - Limited sharing of technical experts, based on coincidences - Not innovation out of ideas of individual organisation	More quality in the procurement function Visible in the LA organisation - Sharing of technical experts - P&O funds benchmark	More quality in the procurement function - The more organisations are similar in products/services and standards, values and culture, the more the technical experts can be shared

Interviewees Themes	A	B	C	D	E	F	G
Resource dependence diminishing	- Access to professional procurement knowledge - Vulnerability - Stronger buying partner in the market	- Access to professional procurement knowledge -Vulnerability	- Access to professional procurement knowledge - Vulnerability - Stronger buying partner in the market	- Access to professional procurement knowledge & products - Follow the Bizob agenda: Legal development - Vulnerability - Stronger buying partner in the market	- Access to professional procurement knowledge & products - Follow the Bizob agenda: Legal development - Visibility of procurement expert(s) -Vulnerability - Stronger buying partner in the market	- Access to professional procurement knowledge & products - Follow the Bizob agenda: Legal development - Visibility of procurement expert(s) - Vulnerability - Stronger buying partner in the market	- Access to professional procurement knowledge - Vulnerability - Stronger buying partner in the market - Procurement function is less vulnerable but vulnerable to the SCP
Resource Information Asymmetry	- Control of civil servants and Bizob by each other	- Expectations - No hard facts and figures				- Developing structural IT procurement information for LA with SCP - Develop key figures for reliable and consistent information	- Developing structural IT procurement information for LA with SCP

Interviewees Themes	A	B	C	D	E	F	G
Demand and resources share	- Stronger buying partner in the market - Continuity procurement experts (ill, holidays)	Stronger buying partner in the market - Continuity procurement experts (ill, holidays)	Stronger buying partner in the market - Continuity procurement experts (ill, holidays)	Stronger buying partner in the market	Stronger buying partner in the market - Continuity procurement experts (ill, holidays)	Stronger buying partner in the market - Continuity procurement	Stronger buying partner in the market - Continuity procurement
Reputation / Legitimacy					Hitchhike on the collaborative brand: political and SME entrepreneurs	LAs use reputation of Bizob for their internal control.	Control by mayors if their SCP have been consulted
Output value products of collaborative procurement products	Green procurement Social Return More access for SME	Green procurement Social Return More access for SME	Green procurement Social Return More access for SME		Green procurement Social Return More access for SME	Green procurement Social Return More access for SME	
Reducing organisational risks	- Decreased failures and risks	- Collaborative organisation founded by members		- Therefore insource procurement function of all civil servants	- Less procurement training and development costs - Decreased failures and risks	- Decreased failures and risks	- Decreased failures and risks
Product	Sustainability	Sustainability	Sustainability	Collaborative	Social value is also	Sustainability	Sustainability

Interviewees Themes	A	B	C	D	E	F	G
development	procurement	procurement - Innovation will be created by specialists and experts - Procurement innovation has been too rarely transferred to civil servants through the SCP	procurement Innovation will be created from external advisors	procurement organisation, so to create innovation from externals	important than correct and accountable procedure - Unknown if innovation procurement results are caused by SCP	procurement and innovation has been created informal during the professional procurement multidiscipline approach of SCP	procurement
Focus on core business LA	- Specialisation - Function division - 4 eyes principle, control	Specialisation	- Specialisation	- Procurement function integral to civil service profession			
Outsourcing procurement function	Professionalism - Distance - Visibility	- Professionalism - On agenda of board/ politician - Civil servant is depend of Bizob - Familiar with processes versus ability to make processes	- Professionalism - Not on agenda of board/ politician	- Only difficult procurement issues - On agenda of board/ politician	- Total procurement issues but as own organisation; no service level agreements	Professionalism More developed by SCP	- Professionalism More developed by SCP - The indifference point: give in autonomy and SCP value
Insourcing				- Cut budgets - Procurement = core business of			

Interviewees Themes	A	B	C	D	E	F	G
				civil servant - Civil servant must know the market to decide to participate with joint tender or not			

Dimensions of Transaction Costs divided into Themes

Interviewees Themes	A	B	C	D	E	F	G
Procurement organisation cost	- Measurable - Savings & gains plausible but not measurable - Lack of synchronisation results, no evidence	Measurable - Savings & gains plausible but not measurable - Lack of synchronisation results, no evidence	Non-committal; causes high transactional costs: non-committal members	Measurable - Savings & gains plausible but not measurable - Lack of synchronisation results, no evidence - Focus of the politics	- Procurement cost are not decreased, even more slightly increased - Procurement cost are concealed over departments - To realise hard savings, you have to cut duplicated functions	Delegation of powers	- Measurable - Savings & gains plausible and measured on micro level - Savings & gains plausible - Sometimes political sensitivity is more important than savings
Procurement	Expect	Expect			- Higher	Lower costs, costs	Exchange

Interviewees Themes	A	B	C	D	E	F	G
human resources					procurement organisational cost than with collaboration, , because activities are duplicated	are divided over more LAs instead of one LA	procurement experts: category management
Standardisation	- Uniformity of procurement dossiers	- Uniformity of procurement dossiers			Starting with commodity departments merging: standardisation: IT outsourcing, are obliged procurement Bizob	- Uniformity of procurement dossiers - Standardisation of procurement documents	- Uniformity of procurement dossiers - Standardisation o procurement documents
Cost reduction By cut budgets					Structural collaboration caused by saving for: sewerage, water management, insurance and IT	More collective frame work agreements: joint purchase groups	
Symmetry of information	- Advice council of business control and finance - Alignment of financial information of all participating		- SSC provides limited arrangements for collaboration between LAs.. They are more focused on the		Linking with other collaborative arrangements in the region: Bizob has lead in time	LA has internal agreements with procurement expert about sharing information - Planning	- Also symmetry of information depends on the maturity stage of the procurement function of the LAs

Interviewees Themes	A	B	C	D	E	F	G
	public organisations - Sluggishness of processes		indivdual LAs			activities between collaborative LA to spread supply for commodity	- Management information of procurement performance
Transparency of information	- Consolidated procurement forecast plans - Short, middle and long term - Procurement plans combine with annual financial estimation	- Functional collaboration	E-procurement	- Civil servants must have knowledge about procurement to be critical and to understand Bizob	E-procurement	- Consolidated procurement forecast plans - Short, middle and long term - Procurement plans combine with annual financial estimation	E-procurement
Scope of agency	- Secure quality services collaborative organisation by extending		- Secure quality services collaborative organisation by extending		IT agency link to procurement collaboration	Secure quality services collaborative organisation by extending	Secure quality services collaborative organisation by extending
Duplication collaboration	Yes	Yes	Yes	GGD and ODZOB, government approved. - Directors do not want to be obliged to use services of SSCs	- LA with most interest is leader - Fragmented with several LA procurement organisations in the region	Yes	
Increase lower	- Not measurable	-Not measurable	Not measurable	-Not measurable	-Not measurable	Measurable	- The indifference

Interviewees Themes	A	B	C	D	E	F	G
costs	(financial) value between in or outsourcing - Instinctively but no hard data - Converted fixed costs to variables costs	(financial) value between in or outsourcing - Instinctively but no hard data - Expectations defining	(financial) value between in or outsourcing - Instinctively but no hard data - Expectations defining	(financial) value between in or outsourcing - Instinctively but no hard data - Expectations defining	(financial) value between in or outsourcing - Instinctively but no hard data - Expectations defining - Converted fixed costs to variables costs	(financial) value between in or outsourcing	point: give in autonomy and SCP value - Converted fixed costs to variables costs
Fragmentation in the organisation of Procurement					Costs a lot of money and time	Costs a lot of money and time	
Goal synchronisation	- Much inefficiency and ineffective-ness: Unproductivity; too many meetings - Many collaborative arrangements lead to inefficiency - Quality certification of primary business	- Not interested in goals of other members - Much inefficiency and ineffective-ness: Unproductivity; too many meetings - Many collaborative arrangements lead to inefficiency	- Bad experience with other regions with procurement collaboration: too non-committal - Collaboration can be seen as a step to merging LAs - Independence is the goal; that delays collaboration - No goal alignment between LAs and IT SSCs - LA manager determines the	- Few discussions about content specifications between LAs in joint procurement groups: unknown on board level - Objective is to be a network organisation: several collaborative partners - Bizob – procurement = non-politics	-Not structural initiated on cost reduction or product development	- Depends on the ambition level of politics and boards	Have you deduced the procurement goals from the organisation goals? - Advantage for non-commercial services - Depends on the number of participants/ members - Depends on the maturity level of the LA

Interviewees Themes	A	B	C	D	E	F	G
			extent of collaboration. The intention is not there. - More harmonisation of the procurement plans between sub region LAs				

Appendix VII. Code scheme Questionnaire

In the table bellows are those advantages diverted off the theories of the literature, further defined and operationalised in dimensions, items and collected with key performance indicators. The objective of item generation is to achieve the content validity of constructs by reviewing literature (Chapter 2) and consulting with local government experts. The dimensions are reviewed, out of the extensive literature, which involve the procurement performance of the organisation by collaboration.

Code	Question / Item	Key Performance Indicator	Examples
SCPRBT1 Structural Procurement Collaboration	Our local government organisation use structural cross organisational teams for process design and improvement Mijn gemeente maakt structureel gebruik van multidisciplinaire teams/werkgroepen van een structurele inkoopsamenwerking voor innovatieve - en verbeteringsprojecten 1: Never/Not al all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	- Number innovative procedures - Number of improvement projects	E-actions, click mini tenders, Design & Construct & Maintenance, Product development integrated in Procurement contracts
SCPRBT2	Our local government organisation has access of dedicate personnel to manage the collaborative process Mijn gemeente kan over gespecialiseerde medewerkers beschikken van	- Number of collaborative procurement projects	Insurances, human flex-resources, energy, telecommunication, traffic signs, Dust collection, Students transport, health-care

Code	Question / Item	Key Performance Indicator	Examples
	een structurele inkoopsamenwerking om het gezamenlijk (inkoop) proces te leiden 1: Strongly disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly agree		
SCPRBT3	Our local government organisation has access of professional procurement specialists out of the structural collaborative procurement organisation to manage individual procurement projects Mijn gemeente kan beschikken over een professionele inkoper van een structurele inkoopsamenwerking, om individuele inkooptrajecten te begeleiden voor mijn gemeente 1: Strongly disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly agree	- Number of procurement projects executed by professional procurement specialist.	Each individual procurement project, public real estate, multi functional, IT hardware
SCPRBT4	Our local governments share technical knowledge Mijn gemeente deelt materiedeskundigheid met andere gemeenten uit de	- Number of external hiring of experts	Sewerage, public lightning, transport, health-care

Code	Question / Item	Key Performance Indicator	Examples
	regio 1: Never/Not at all (0) 2: Seldom/Rarely (1-2 dossiers/ times per year) 3: Sometimes (3-5 dossiers/ times per year) 4: Most of the time/Regular (6-10 dossiers/ times per year) 5: All of the time/Often (>10 dossiers/ times per year)		
SCPRBT5	Our local government organisations have more advantages to product/technological developments comparing without structural collaborative procurement organisation Mijn gemeente heeft meer voordelen, door de structurele inkoopsamenwerking, met het toepassen van innovatieve uitvragen bij product en technologische ontwikkelingen 1: Much worse 2: Worse 3: About the same 4: Better 5: Much better	- Number of innovative products, services and works.	Collection dust 3 compartments in one vehicle, order systems, catering, cleaning services, health-care
SCPRBT6	Our local government organisation have better relationships with suppliers comparing without structural collaborative procurement organisation Mijn gemeente haalt meer uit haar zakelijke relatie met leveranciers, dan	- Number of complaints about performance suppliers - Additional costs	Willingness to do more for the same conditions in the contract

Code	Question / Item	Key Performance Indicator	Examples
	zonder gebruikt te maken van een structurele inkoopsamenwerking 1: Much worse 2: Worse 3: About the same 4: Better 5: Much better		
SCPRBT7	Our local government organisations share procurement equipment (network, IT, computers) Mijn gemeente deelt (o.a. ICT) inkoop software met andere gemeenten binnen de structurele inkoopsamenwerking 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	- Number of procurements systems. - Costs per procurement project	Tenderned, Negometrix and Bizob information system (project management)
SCPRBT8	Our local government organisations pool procurement and non procurement resources (training, time, money, e.d.) Mijn gemeente wisselt inkoopcapaciteit, opleidingen, kennis uit binnen de regio via een structurele inkoopsamenwerking 1: Never/Not at all 2: Seldom/Rarely	Procurement hrm cost per turnover local government organisation	Allocating technical knowledge between local government organisations in the same BIZOB region

Code	Question / Item	Key Performance Indicator	Examples
	3: Sometimes 4: Most of the time/Regular 5: All of the time/Often		
SCPRBT9	Civil servant of local governments are indirectly trained in business skills through the collaborative procurement organisation Ambtenaren binnen mijn gemeente hebben indirect vaardigheden en kennis overgenomen van de structurele inkoopsamenwerking 1: Disagree 2: Fairly 3: Unsure 4: Mostly 5: Agree	Number of project plans and time schedule	Business working approach in public projects

Code	Item	Key Performance Indicator	Examples
SCPRDT1 Structural Procurement Collaboration	Local government share/get access to *critical* procurement knowledge, expertise and resources via structural collaborative procurement organisation Mijn gemeente deelt en/of heeft de beschikking over schaarse inkoopkennis en inkoopcapaciteit via de structurele inkoopsamenwerking	Number of experts per commodity in the collaboration region	Allocation of knowledge and responsibilities: Dust management, sewerage management

Code	Item	Key Performance Indicator	Examples
	1: Strongly disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly agree		
SCPRDT2	Local governments have more buying power to strategic contract terms of monopolistic suppliers via structural collaborative procurement organisation Mijn gemeente heeft meer invloed op de voorwaarden van monopolistische leveranciers via de structurele inkoopsamenwerking 1: Strongly disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly agree	Consolidated spend related to the individual spend	Collaborated joint procurement projects
SCPRDT3	Local governments have awareness of the demands and of the alternatives via structural collaborative procurement organisation Mijn gemeente is zich bewust van de verschillende en alternatieve specificaties van producten/diensten/werken via de structurele inkoopsamenwerking	Variety between specification of products of services	Preference for technical systems

Code	Item	Key Performance Indicator	Examples
	1: Strongly disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly agree		
SCPRDT4	Local governments have more control over information/position in the communication flow via structural collaborative procurement organisation Mijn gemeente heeft meer grip op de informatievoorziening en communicatie in inkoopprocessen via de structurele inkoopsamenwerking 1: Strongly disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly agree	- Number communication documents. - Response rate	Information and single point communication
SCPRDT5	Local governments have more information/knowledge of the supply market via structural collaborative procurement organisation Mijn gemeente ontvangt meer informatie en kennis uit de markt via de structurele inkoopsamenwerking 1: Strongly disagree	Number market analyses	More structural up to date information and experience available

Code	Item	Key Performance Indicator	Examples
	2: Disagree 3: Neutral 4: Agree 5: Strongly agree		
SCPRDT6	Transparency of information during the procurement process via structural collaborative procurement organisation Inkoopprocessen worden transparanter uitgevoerd via de structurele inkoopsamenwerking 1: Much worse 2: Worse 3: About the same 4: Better 5: Much better	Number of legal objections	Information and single point communication
SCPRDT7	Local governments have more access to competitions/more buyers available via structural collaborative procurement organisation Mijn gemeente heeft meer beschikking over professionele inkopers via de structurele inkoopsamenwerking 1: Strongly disagree 2: Disagree	Number of procurement expert related to spend	Exchange and availability of procurement experts

Code	Item	Key Performance Indicator	Examples
	3: Neutral 4: Agree 5: Strongly agree		
SCPRDT8	Local governments have together more volume in the market via structural collaborative procurement organisation Mijn gemeente koop via de structurele inkoopsamenwerking met meer volume in (schaalvoordelen) 1: Strongly disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly agree	Individual spend related to the collaborative spend	Consolidated spend
SCPRDT9	Local governments uses the legitimacy via structural collaborative procurement organisation De inkoopsamenwerking heeft ook een legitimerend effect van goed opdrachtgeverschap voor mijn gemeente 1: Strongly disagree 2: Disagree 3: Neutral 4: Agree	Number of references to the collaborative organisation in business documents	Internal business documents

Code	Item	Key Performance Indicator	Examples
SCPRDT10	5: Strongly agree Local government hitchhike with collaborative brand via structural collaborative procurement organisation Mijn gemeente lift mee met de bekendheid van de structurele inkoopsamenwerking 1: Strongly disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly agree	Acquaintance in the market	Branch organisations of Local suppliers and national government

Code	Item	Key Performance Indicator	Examples
SCPAT1 Structural Procurement Collaboration Agency Theory	Local governments have agreement on the procurement goals and strategy Mijn gemeente heeft binnen haar (sub)regio voor de middellange- en lange termijn dezelfde tactische inkoopdoelstellingen en strategische inkoopplannen 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes	Number of plans	Long term collaborative commodity plans

Code	Item	Key Performance Indicator	Examples
	4: Most of the time/Regular 5: All of the time/Often		
SCPAT2	Local governments have agreement on the role of collaboration in the procurement processes Mijn gemeente heeft afspraken met andere gemeenten, binnen de (inkoop) regio over gezamenlijke inkoopprocessen 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	Cycle time of collaborative procurement project	The cycle time to achieve a desired output in collaborative procurement project
SCPAT3	Local governments make use of (collaborative) public organisations where procurement function is integrated and executing the procurement function Regionale publieke organisaties voeren voor mijn gemeente publieke activiteiten, inclusief de aanbesteding/inkoop uit (geen Bizob). 1: Never/Not al all (0) 2: Seldom/Rarely (1 organisation) 3: Sometimes (2-3 organisations) 4: Most of the time/Regular (4-5 organisations)	Number of (external) public organisations for procurement	Affiliated public (pps) organisations with insourced procurement organisation. For example: environment, health care, taxes, fire department etc. (GGD, ODZOB, gemeente, Werkvoorzieningsschap)

Code	Item	Key Performance Indicator	Examples
	5: All of the time/Often (>5 organisations)		
SCPAT4	Local government makes use of a central organisation for procurement in the region Mijn gemeente maakt gebruikt van een publieke structurele organisatie(s) in de regio voor haar inkoopvraagstukken 1: Never/Not al all (0) 2: Limited (1-2) 3: Several (3-5) 4: Substantial (6-10) 5: Many (>10)	Number of central agencies for procurement	Agency Rijk, Bizob, Inkoop gemeente Eindhoven, Inkoop gemeente Helmond, etc.
SCPAT5	Local governments agree that the *individual goals* can be achieved through working toward the goals of the collaborative procurement processes. Mijn gemeente herkent dat haar individuele inkoop doelen bereikt worden door gezamenlijke inkoop en niet beperkt worden door de structurele (inkoop) samenwerking 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	- Number of uniform strategic policy documents - Number collaborative procurement projects - Central project managers	Commitment, formal and acting

Code	Item	Key Performance Indicator	Examples
SCPAT6	Local governments jointly layout collaboration implementation plans under supervision of the structural collaborative procurement organistion to achieve the goals of the procurement function Mijn gemeente stelt samen met haar regio gemeenten onder leiding van de structurele inkoopsamenwerking jaarlijkse inkoopplanen op, om haar doelstellen te realiseren 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	Consolidated procurement plans	Annual procurement plans
SCPAT7	Local government develops jointly plans for the demand forecasts related to the market (demand/supply) under supervision of the structural collaborative procurement organistion Mijn gemeente bewaakt en actualiseert periodiek de inkoopplannen met haar regio gemeenten en houdt daarbij rekening met marktontwikkelingen onder begeleiding van de inkoopsamenwerking 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes	Central forecast plans	Follow up system for allocating the supply of the market in health market

Code	Item	Key Performance Indicator	Examples
	4: Most of the time/Regular 5: All of the time/Often		
SCPAT8	Local government take jointly resolutions on forecast exceptions if occurs under supervision of the structural collaborative procurement organisation Mijn gemeente neemt gezamenlijk met regio gemeenten van de inkoopsamenwerking, besluiten over uitzonderingen /afwijkingen t.o.v. het gezamenlijk inkoopplan 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	Number of exceptions or modifications	Demand allocating in the health market
SCPAT9	Local government structurally consulting concerning procurement policy with their partners out of the region Mijn gemeente heeft periodiek overleg inzake het inkoopbeleid met andere gemeenten van de structurele inkoopsamenwerking 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular	Number of formal strategic meetings	Strategic meeting about procurement policy

Code	Item	Key Performance Indicator	Examples
	5: All of the time/Often		
SCPAT10	Local governments in your region have joint procurement plan about product-services, works commodities De gemeenten in de regio hebben gezamenlijke inkoopplannen voor leveringen/diensten, werken en het Sociale domein 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	Central procurement plan for a region	Central tactical procurement plan
SCPAT11	Your local government *make use* of a legal procurement center for law and regulations Mijn gemeente heeft beschikking tot een juridsche aanbestedings helpdesk binnen haar structurele inkoopsamenwerking 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	Central agency for procurement law and regulation	Joint legal procurement department

Code	Item	Key Performance Indicator	Example
SCPTC1 Structural Procurement Collaboration Transaction Cost Theory	Minimising of transaction costs in the sourcing phase, tender phase Structurele inkoopsamenwerking leidt tot lagere inkoopkosten en transactiekosten van inkoop en aanbetedignstrajecten. 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	Cost rate per procurement demand	No or limited procurement costs
SCPTC2	Minimising of transaction costs in the supply phase Structurele inkoopsamenwerking leidt tot lagere inkoopkosten en transactiekosten van bewaken en managen van contracten 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	Cost rate pro procurement contract	No or limited procurement costs

SCPTC3	Minimising of procurement management costs Structurele inkoopsamenwerking leidt tot lagere kosten van managen van de inkoopfunctie 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	Management costs pro procurement contract	No or limited procurement costs
SCPTC4	IT-costs for execution of the procurement processes Structurele inkoopsamenwerking leidt tot lagere kosten van ICT om inkooptrajecten te kunnen uitvoeren 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	IT costs per procurement contract	No or limited procurement costs
SCPTC5	Number of independent procurement experts Number of independent technical experts Structurele inkoopsamenwerking leidt tot lagere kosten t.b.v. het inhuren van externe (privaat) t.b.v. inkoop en aanbestedingstrajecten.	Costs of external independent experts pre procurement tender	Central function (project or/and technical) for collaborative organisations

	1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often		
SCPTC6	External-independent costs of legal knowhow of procedures or contracts Structurele inkoopsamenwerking leidt tot lagere kosten van het inhuren van externe (privaat) juridische aanbestedingskennis 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	Costs of external legal independent experts pre procurement project	Central function (legal) for collaborative organisations
SCPTC7	Re-establishing of public tender costs Structurele inkoopsamenwerking voorkomt van fouten/ minder fouten in de inkoopprocedure? 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular	Costs of re-established tender per tender	Caused by failures in the tender procedure

	5: All of the time/Often		
SCPTC8	Costs arising from the delay in implementation of public contracts Structurele inkoopsamenwerking leidt tot snellere doorlooptijd van de uitvoering/ implementatie van contracten 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	Delay costs per tender	Establishing of project.
SCPTC9	Cost of lawsuit Structurele inkoopsamenwerking leidt tot minder rechtszaken (lagere juridische kosten) ten aanzien van aanbestedingsprocedures 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	Lawsuit costs per tender	Lawsuit costs
SCPTC10	Uniformity in the demand and specification Structurele inkoopsamenwerking leidt tot standaardisatie en uniformiteit in behoefte en specificatie	Number of product or brands characteristics:	Standardisation in specifications, quality standards, after-sales requirements

	1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often		
SCPTC11	Uniformity in the Human resources Structurele inkoopsamenwerking leidt tot standaardisatie en uniformiteit in de inkoopdienstverlening 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	Number of standardized personnel characteristics	Standardisation in organisation and profession skills of staff and management of staff
SCPTC12	Uniformity in the procurement process Structurele inkoopsamenwerking leidt tot standaardisatie en uniformiteit binnen het inkoopproces 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular	Standardised procurement process for sourcing Standardised procurement process for supply	Standardisation in research on potential suppliers, supplier selection, negotiation and contracting. Standardization in evaluation and follow-up

	5: All of the time/Often		

Code	Item	Key Performance Indicator	Example
SCPCCT1 Structural Procurement Collaboration Core Competence Theory	Introduce new services to citizen *more rapidly* via structural collaborative procurement organisation Nieuwe/ Innovatieve dienstverlening en producten zijn sneller bij de burger door betrokkenheid van de structurele inkoopsamenwerking 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	Number of (innovative) product development	Collecting dust
SCPCCT2	Introduce flexibility to political or citizen demand via structural collaborative procurement organisation Meer flexibiliteit t.b.v. het realiseren van 'ad hoc' ontstane inkoopbehoefte (geinitieerd door politiek en uiteindelijk voor de burgers) via de structurele inkoopsamenwerking 1: Never/Not at all	Number of unexpected, not planned demand	Take care of refugees

	2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often		
SCPCCT3	Increase lower costs via structural collaborative procurement organisation Lagere kosten voor de inkoopfunctie via structurele inkoopsamenwerking 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	Lower *procurement* costs	Reduction of costs out of the procurement function
SCPCCT6	Increases innovation via structural collaborative procurement organisation Meer innovatie in leveringen/diensten , werken en binnen het sociale domein via de structurele inkoopsamenwerking 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	Number of innovative products, services and infrastructural works	Digital library IT system

SCPCCT8	Reduces (procurement) operational risks via structural collaborative procurement organisation Vermindering van operationele capaciteit risico. Structurele inkoopsamenwerking is minder gevoelig voor verstoringen in de beschikbaarheid van (human) resource 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	Time registration	Consistent in procurement function capacity
SCPCCT7	Improves strategic position via structural collaborative procurement organisation Direct beschikking over inkoopmanagers indien noodzakelijk bij vraagstukken via de structurele inkoopsamenwerking 1: Never/Not at all 2: Seldom/Rarely 3: Sometimes 4: Most of the time/Regular 5: All of the time/Often	Time registration	Direct on call and available of procurement management

Appendix VIII. Pilot Study

Pilot: Inkoopresultaten van individuele gemeenten en gelieerde publieke organisaties

Geachte mevrouw/mijnheer,

Hierbij wil ik uw medewerking vragen voor mijn onderzoek in het kader van mijn research studie aan de University of South Wales. Dit onderzoek richt zich op de effecten van structurele inkoopsamenwerking voor gemeenten en daaraan gelieerde publieke organisaties. Voor dit onderzoek worden gegevens gevraagd over de ervaringen die uw gemeente heeft met de structurele inkoopsamenwerking waar uw gemeente aan deelneemt of gebruik van maakt. De vragen zijn voornamelijk gesteld in de vorm van stellingen, op een schaal van 1-7. U wordt gevraagd uw score hierop aan te geven.

Het invullen van de vragen zal ongeveer 15 minuten van uw tijd kosten. De door u verstrekte gegevens zullen uitsluitend voor dit onderzoek gebruikt worden. De resultaten van de vragenlijst worden vertrouwelijk behandeld. Het is voor ons niet mogelijk om te zien wie welke antwoorden ingevuld heeft. Mocht u interesse hebben in de bevindingen van het onderzoek, dan kunt u aan het eind van de vragenlijst dit aangeven. Uw e- mailadres wordt uitsluitend eenmalig voor dit doel gebruikt en zal niet worden bewaard.

U kunt via onderstaande link de vragenlijst openen en de vragen en stellingen beantwoorden. Neem rustig de tijd om de vragen en stellingen door te lezen en probeer zo eerlijk mogelijk te antwoorden. Er zijn geen goede of foute antwoorden.

Mocht u nog vragen hebben, dan kunt u contact opnemen via onderzoek@bizob.nl

Hartelijk dank voor deelname. Uw feedback is belangrijk.

Met vriendelijke groet,

Marcel Stuijts.

Enquête starten

Stuur dit e-mailbericht niet door aangezien deze enquêtekoppeling uniek is voor u. Het ontvangen van enquêtes van deze afzender Abonnement op deze lijst beëindigen

Op dit bericht is een disclaimer van toepassing. De volledige tekst vindt u op:
http://www.kempengemeenten.nl/maildisclaimer

Synthesising into mixed methods research

A pilot study to establish the procedures and parameters was worthwhile in mixed methods research to determine applicable levels of independent variables and to determine the reliability and validity of the observational methods used, which are crucial for success (Bordens & Abott, 2002). Although it takes additional time, it can help to prevent confusion or misinterpretations, which ultimately saves time. In this mixed methods research, it was useful to run a pilot study by formulating the hypotheses and conducting interviews. For the second phase, it made sense to test the questionnaire. For the consistency of the research, the same group of experts for testing were used.

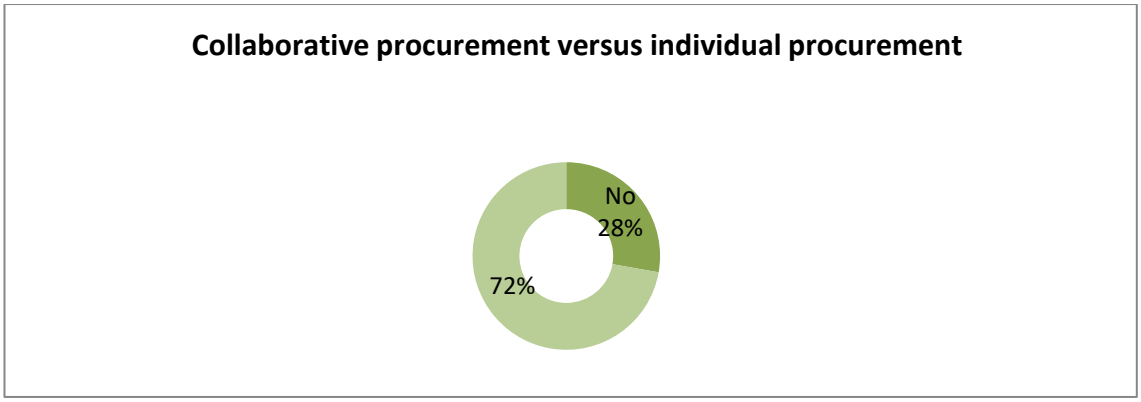
Bizob and process cost of public tenders

The collaborative public procurement organisation Bizob is described in chapter 1. In this paragraph, the time spent on sourcing commodities individually or jointly for more local governments will compared. This pilot-case study applies the technique from Karjalainen (2011) to financial procurement cost data from the Bizob region. In further chapters, the basis of the data analysis, data collection, methods and research plan will be developed.

The data have been measured in an intra-compaction table digital E-time-management system. Procurement practitioners, who have executed procurement projects, are obligated to register time spent in this system. An external accountant controls the system. Table 6 presents a download of the management report of the pilot-case study in the Bizob environment.

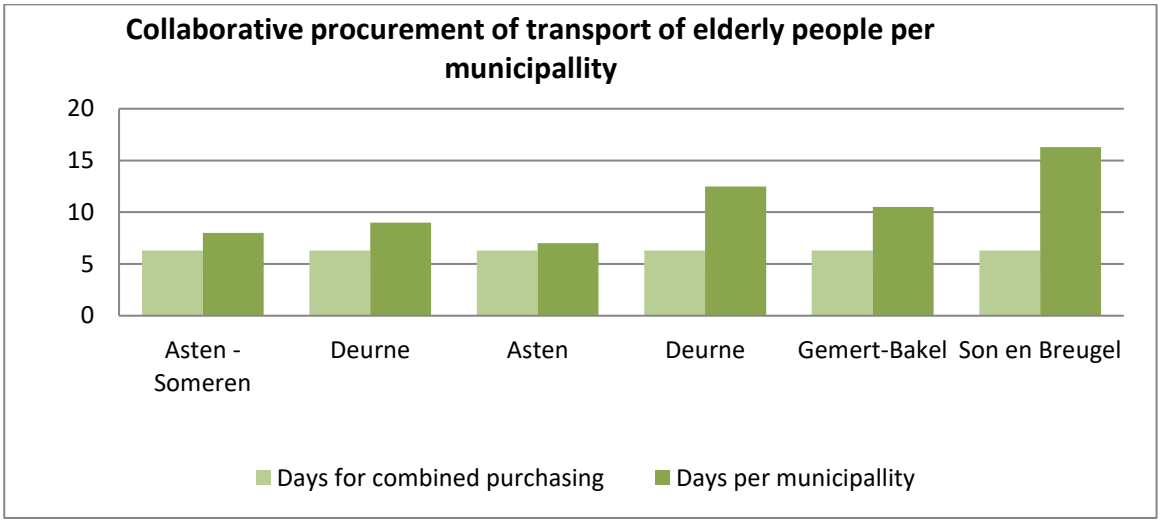
In the table below, the difference in time, ex-ante procurement cost, for executing several procurement projects is shown. These procurement projects have been executed for local government organisations in the Southeast of the Netherlands by the Bizob procurement organisation. These are compared to those procurement product/service commodities that have been obtained in the past, either individually or in collaboration.

Tender:	Municipality	Days spent for individual:	Days spent by collaboration:	Difference in days spent
Transport of elderly people	Asten - Someren	8	6.3	-1.7
Transport of elderly people	Deurne	9	6.3	-2.7
Transport of elderly people	Asten	7	6.3	-0.7
Transport of elderly people	Deurne	12.5	6.3	-6.2
Transport of elderly people	Gemert-Bakel	10.5	6.3	-4.2
Transport of elderly people	Son en Breugel	16.3	6.3	-10
Insurance	Best	3	1.8	-1.2
Social health	Peel	9	7.2	-1.8
Social health	Waalre	23.5	7.2	-16.3
Inspection and control of sewerage	Asten	3.2	4	0.8
Inspection and control of sewerage	Bladel	3	4	1
Inspection and control of sewerage	Someren	4.5	4	-0.5
Inspection and control of sewerage	Someren	3	4	1
Stair lifts	Son en Breugel	5.5	5.8	0.3
Stair lifts	5 Kempen gemeenten	4.4	5.8	1.4
Printed materials	Oirschot	3	2	-1
Printed materials	Reusel- De Mierden	3	2	-1
Printed materials	Veldhoven	2	2	0



It is interesting that for 72% of the procurement projects, the collaborative approach took less time compared to the individual approach.

The graph below shows for one commodity – the transport of elderly people – the difference in time spent of the ex-ante procurement time between individual procurement and collaborative procurement.



It is interesting in this commodity that the collaborative approach for time spent is less for every municipality. On the other hand, for the commodities inspection and control, sewerage and stair lifts, this conclusion is not always valid and follow-up studies are required in great depth.

The coming up table shows the chains of agencies for the (principal) local government municipalities in South East of Brabant. The listed LAs have the financial risk of the agencies shown on the right.

Agency	ODZOB/ODBN	GGD	Bizob	BNG	Peel 6.1	VRBZO	VHHBZO	MRE/SRE	GRSK	GRSA2	WVK	KBP	Dommelvallei	Brainport
Local Authority														
Asten	x	x	x	x	x	x	x	x	x					
Bergeijk	x	x	x	x		x	x	x	x		x	x		
Best	x	x	x	x		x	x	x						x
Bladel	x	x	x	x		x	x	x	x		x	x		
Cranendonck	x	x	x	x		x	x	x		x				
Deurne	x	x	x	x	x	x	x	x						
Eersel	x	x	x	x		x	x	x	x		x	x		
Geldrop-Mierlo	x	x	x	x		x	x	x					x	
Gemert-Bakel	x	x	x	x	x	x	x	x						
Haaren	x	x	x	x		x								
Heeze-Leende	x	x	x	x		x	x	x		x				
Laarbeek	x	x	x	x	x	x	x	x						
Nuenen	x	x	x	x		x	x	x					x	
Oirschot	x	x	x	x		x	x	x	x					
Reusel-De Mierden	x	x	x	x		x	x	x	x		x	x		
Someren	x	x	x	x	x	x	x	x						
Son en Breugel	x	x	x	x		x	x	x					x	
Uden	x	x	x	x		x	x							
Valkenswaard	x	x		x		x	x	x		x				
Veldhoven	x	x	x	x		x	x	x						x
Vught	x	x	x	x		x								
Waalre	x	x	x	x		x	x	x					x	

Appendix IX. Questionnaire

Inkoopresultaten van gemeenten door (structurele) samenwerking

Bewerken

Toelichting

In dit onderzoek wordt de relatie gelegd tussen structurele samenwerking op inkoopgebied en het potentieel resultaat, gefocused op lokale overheden en hun onderlinge relaties.

Structurele inkoopsamenwerkingen worden gezien als regelmatige terugkerende samenwerking op het gebied van inkoop binnen uw regio door een formele organisatie of formele overlegstructuur en zal in de vragen weergegeven worden met SIS.

Waar 'gemeente(n)' wordt genoemd, worden tevens aan gemeenten gelieerde publieke organisaties bedoeld, zoals veiligheidsregio, omgevingsdienst, Shared Service Centre, Sociaal Domein e.d.

In dit onderzoek wordt onderzocht, of SIS zou kunnen leiden tot meer efficiency en effectiviteit voor uw gemeente. Ook de actoren die het resultaat voor uw gemeente kunnen beïnvloeden worden onderzocht.

Voor dit onderzoek zijn de reele ervaringen van uw gemeente/organisatie met de (structurele) inkoopsamenwerking van belang. Dit betreft de inkoopsamenwerkingen waar uw organisatie gebruik en deel van uit maakt.

Met vriendelijke groet,

Marcel Stuijts

Inkoopresultaten van gemeenten door (structurele) samenwerking

Over uw gemeente en uw rol binnen de organisatie

Vragen 1-6 van de 56

Kunt u aan geven wat uw rol is binnen uw organisatie en binnen welk vakgebied. Mocht uw situatie niet exact genoemd worden, wilt u dan die optie aantikken die er zoveel mogelijk bij past.

1. In welk vakgebied voert u uw functie uit?

- ◯ Financien, economie, middelen, facilitair, control
- ◯ Openbare ruimte en/of milieu
- ◯ Sociale domein
- ◯ Overig

2. Binnen welke stroom/onderdeel voert u uw functie binnen uw vakgebied uit?

- ◯ Beleidsmedewerker, strategisch
- ◯ Operationele medewerker, dagelijkse operatie
- ◯ Tactisch senior medewerker
- ◯ Management

3. In hoeverre heeft u te maken met de inkoop- en aanbestedingsfunctie binnen uw dagelijkse werkzaamheden? Dit kan zijn zowel in de operatie ervan (uitvoering), tactisch (inkoopstrategieen, programma van eisen en contractering) als strategisch (bijvoorbeel beleid, leveranciersrelaties en strategische organisatie keuzes).

- ◯ Nooit
- ◯ Zelden, halfjaarlijks
- ◯ Soms, maandelijks
- ◯ Regelmatig, wekelijks
- ◯ Heel vaak, dagelijks

4. Hoeveel *inwoners* heeft u gemeente of verzorgingsgebied?

0 - 15.000	15.001 - 25.000	25.001 - 35.000	35.001 - 50.000	50.001 - 65.000	65.001 - 100.000	> 100.001
◯	◯	◯	◯	◯	◯	◯

5. Hoeveel fte zijn er werkzaam in uw gemeente?

6. Mijn gemeente hecht veel waarde aan het thema Maatschappelijk Verantwoord Inkopen (duurzaamheid, social, toegang mkb).

Totaal niet						Heel veel
◯	◯	◯	◯	◯	◯	◯

Inkoopresultaten van gemeenten door (structurele) samenwerking

Kennis en capaciteit

Vragen 7-15 van de 56

Onderstaande vragen hebben betrekking op het gebruik maken van kennis en capaciteit van een SIS. Deze kennis en capaciteit kunnen worden gebruikt ten aanzien van aanbestedingstechnieken, het bevorderen van innovatie, marktanalyses, capaciteit om inkoop- en aanbestedingstrajecten te begeleiden etc..

7. Mijn gemeente maakt *gebruik* van multidisciplinaire teams/werkgroepen van een SIS voor innovatieve - en verbeteringsprojecten.

Nooit ○ ○ ○ ○ ○ ○ ○ In alle voorkomende gevallen

8. Mijn gemeente kan beschikken over *gespecialiseerde inkopers* van een SIS om het gezamenlijk (inkoop) proces te begeleiden.

Niet mogelijk ○ ○ ○ ○ ○ ○ ○ Altijd mogelijk

9. Mijn gemeente kan *beschikken* over een *professionele inkoper* van een SIS, om voor mijn gemeente inkooptrajecten te begeleiden.

Niet mogelijk ○ ○ ○ ○ ○ ○ ○ Altijd mogelijk

10. Organisaties kunnen kennis delen met elkaar. Dit kan zowel direct (face to face) als indirect (via informatiesystemen).

Mijn gemeente deelt structureel materiedeskundigheid/kennis binnen een SIS.

Nooit, in geen enkel geval						Altijd, in alle voorkomende gevallen
○	○	○	○	○	○	○

11. Mijn gemeente heeft bij het *toepassen van innovatieve uitvragen bij product en technologische ontwikkelingen*, voordelen van de SIS.

Geen enkele, de structurele inkoopsamenwerking draagt hier niet aan bij						Altijd, in alle voorkomende gevallen draagt de inkoopsamenwerking hier aan bij
○	○	○	○	○	○	○

12. Mijn gemeente haalt *meer uit haar zakelijke relatie met leveranciers*, dan zonder gebruik te maken van een SIS.

Geen meerwaarde						Altijd meerwaarde, bij gebruik maken van de structurele inkoopsamenwerking
○	○	○	○	○	○	○

13. Mijn gemeente deelt (o.a. ICT) inkoop software met andere gemeenten binnen de SIS.

Nooit, in geen enkel geval						Altijd, in alle voorkomende gevallen
○	○	○	○	○	○	○

14. Mijn gemeente wisselt capaciteit, opleidingen en kennis uit binnen de regio via een SIS.

Nooit in geen enkel geval						Altijd, in alle voorkomende gevallen
○	○	○	○	○	○	○

15. Binnen organisaties kunnen afdelingen indirect van elkaar leren, bijvoorbeeld door het voorbeeldgedrag.

Ambtenaren binnen mijn gemeente, hebben *indirect vaardigheden en/of kennis overgenomen* van de SIS.

Geen vaardigheden en/of kennis indirect overgenomen						Altijd vaardigheden en/of kennis indirect overgenomen
○	○	○	○	○	○	○

Inkoopresultaten van gemeenten door (structurele) samenwerking

Samenwerken en de afhankelijksrelatie
Vragen 16-25 van de 56

Onderstaande vragen hebben betrekking op de *mate van afhankelijkheid van uw gemeente van externe bronnen.* Dit kunnen leveranciers zijn van werken, zorgproducten/diensten, of andere leveringen of diensten. Maar ook specialistische (inkoop) expertise en capaciteit. Door gebruik te maken van een SIS kan de afhankelijkheid worden gereduceerd.

16. Mijn gemeente heeft de beschikking over specialistische *inkoopkennis* en inkoopcapaciteit via de SIS. Hierbij kan gedacht worden aan specifieke inkoopkennis voor Jeugdzorg, WMO, Afval, ICT, Gebouwen e.d.

Geen beschikking over specialistische inkoopkennis						Altijd beschikking over specialistische inkoopkennis
○	○	○	○	○	○	○

17. Mijn gemeente heeft *meer invloed op de voorwaarden van monopolistische leveranciers* via de SIS.

Geen invloed						Veel meer invloed
○	○	○	○	○	○	○

18. Mijn gemeente is zich *meer bewust van de verschillende en alternatieve specificaties van producten/diensten/werken* via de SIS.

Niet meer bewust						Veel meer bewust
○	○	○	○	○	○	○

19. Een van de kenmerken van het uitvoeren van aanbestedingen door een SIS is een verandering van de informatievoorziening en communicatie naar inschrijvers. Deze kan bijvoorbeeld door 'de afstand' uit de aandacht verdwijnen of door coördinatie leiden tot meer eenduidigheid.

Mijn gemeente heeft *meer grip/controle op de informatievoorziening en communicatie in inkoopprocessen* via de SIS.

Niet meer grip/controle						Veel meer grip/controle
○	○	○	○	○	○	○

20. Een SIS kan bijdragen aan actuele marktinformatie, waardoor gemeenten minder afhankelijk zijn van externen.

Mijn gemeente *ontvangt meer informatie en kennis uit de markt* via de SIS.

Geen informatie en kennis uit de markt						Veel informatie en kennis uit de markt
○	○	○	○	○	○	○

21. Inkoopprocessen worden *transparanter uitgevoerd* via de SIS voor mijn gemeente.

Totaal niet transparanter						Heel veel transparanter
○	○	○	○	○	○	○

22. Gemeenten kunnen meer capaciteit en kennis uitwisselen binnen hun SIS, waardoor ze minder afhankelijk kunnen zijn van externen.

Mijn gemeente heeft *meer beschikking over professionele inkopers* via de SIS.

Niet meer beschikking over professionele inkopers						Veel meer beschikking over professionele inkopers
○	○	○	○	○	○	○

23. Gemeenten kunnen door samen in te kopen binnen de SIS een 'blok' vormen, waardoor ze een betere machtpositie hebben tegenover specifieke leveranciers.

Mijn gemeente koopt via de SIS *met meer volume in waardoor ze een betere machtpositie hebben tegenover specifieke leveranciers.*

Geheel niet mee eens						Geheel mee eens
○	○	○	○	○	○	○

24. (Structurele) Inkoopsamenwerkingen kunnen een legitmerend effect van goed opdrachtgeverschap uitstralen over haar deelnemers/gemeenten richting interne stakeholders (directie, gemeenteraad, ondernemers, burgers e.d.).

De SIS heeft ook *een legitimerend effect van goed opdrachtgeverschap* voor mijn gemeente.

Geen meerwaarde voor legitimerend effect van goed opdrachtgeverschap						Absoluut veel meerwaarde voor legitimerend effect van goed opdrachtgeverschap
○	○	○	○	○	○	○

25. (Structurele) Inkoopsamenwerkingen kunnen een eenduidige bekenheid uitstralen voor haar deelnemers/gemeenten naar externe partijen (leveranciers, zorgverleners, branchеverenigingen, e.d.).

Mijn gemeente *lift mee met de bekendheid* van de SIS.

Nooit, in geen enkel geval						Altijd, in alle voorkomende gevallen
○	○	○	○	○	○	○

Inkoopresultaten van gemeenten door (structurele) samenwerking

Gemeenten en hun relatie met samenwerkingsverbanden
Vragen 26-36 van de 56

Onderstaande vragen hebben betrekking op de wijze waarop de gemeente/deelnemer van de structurele inkoopsamenwerking participeert in publieke samenwerkingswerkings verbanden. Voor een optimaal effectieve en efficiente samenwerking tussen gemeenten/deelnemers en tussen de structurele samenwerkingsverbanden, dienen de doelen en activiteiten tussen deelnemers/gemeenten (opdrachtgevers) en structurele samenwerkingsverbanden bij elkaar bekend te zijn.

26. Voor een effectieve en efficiente samenwerking is het van belang dat de gemeenten/deelnemers van de SIS, de (inkoop) doelstellingen (zoals duurzaamheid, social return, kosten reductie etc.) zoveel mogelijk harmoniseren.

Mijn gemeente heeft binnen haar (sub)regio *afspraken over de inkoopdoelstellingen en strategie met de andere deelnemende gemeenten.*

Er zijn geen afspraken over de inkoopdoelstellingen en strategie						Er zijn in alle gevallen afspraken over de inkoopdoelstellingen en strategie
○	○	○	○	○	○	○

27. Binnen een SIS kan een 'richtlijn voor gezamenlijk inkopen' bijdragen aan de effectiviteit en efficiency van de uitvoering.

Mijn gemeente heeft afspraken met andere gemeenten binnen de (inkoop) regio over de uitvoering van gezamenlijke inkoopprocessen.

Er zijn geen afspraken						Er zijn voor alle gezamenlijke inkooptrajecten eenduidige afspraken over de uitvoering
○	○	○	○	○	○	○

28. Publieke regionale organisaties, zoals bijv. milieudiensten, GGD, werkvoorzieningschappen, Zorg/Jeugd/WMO diensten, kunnen taken van de gemeente regionaal uitvoeren.

Taken worden uitgevoerd door deze publieke regionale organisaties en daardoor wordt een deel van de inkoopuitgaven door hen verzorgd.

Nee, in geen enkel geval						Ja, in heel veel gevallen
○	○	○	○	○	○	○

29. Gemeenten kunnen bepaalde taken laten uitvoeren, inclusief de inkoop- en aanbestedingsfunctie, door een uitvoeringsorganisatie, (grotere) gemeente of door een SIS.

In welke mate maakt uw gemeente gebruik van publieke structurele organisatie(s) in de regio voor haar inkoopvraagstukken.

Nooit (0)	Beperkt (1-2)	Af en toe (2-3)	Soms (4-5)	Regelmatig (6-7)	Vaak (8-9)	In heel veel gevallen (>=10)
○	○	○	○	○	○	○

30. Gezamenlijk inkopen kan er ook toe leiden, dat wensen of eisen van een deelnemer niet geheel kunnen worden meegenomen.

Mijn gemeente herkent *dat haar individuele inkoop doelen beperkt* worden door de SIS.

Geen enkele beperking						In hoge mate sprake van beperking
○	○	○	○	○	○	○

31. Mijn gemeente *stelt samen met haar regio gemeenten of samen met de SIS, jaarlijkse inkoopplanen op* om haar doelstellen te realiseren.

Nooit						Altijd
○	○	○	○	○	○	○

32. Mijn gemeente bewaakt en actualiseert periodiek de inkoopplannen met haar regio gemeenten en houdt daarbij rekening met marktontwikkelingen onder begeleiding van de SIS.

Zeer slecht — Uitstekend

○ ○ ○ ○ ○ ○ ○

33. Mijn gemeente neemt gezamenlijk met regio gemeenten van de SIS besluiten over uitzonderingen / afwijkingen t.o.v. het gezamenlijk inkoopplan.

Nooit — Altijd

○ ○ ○ ○ ○ ○ ○

34. Mijn gemeente heeft periodiek overleg *inzake het inkoopbeleid met andere gemeenten* van de SIS.

Nooit, in geen enkel geval — In alle gevallen

○ ○ ○ ○ ○ ○ ○

35. Centraal of gecoördineerde inkoopplannen voor de structureel samenwerkende gemeenten, kunnen de effectiviteit en efficiency bevorderen.

De gemeenten in de regio hebben *gezamenlijke inkoopplannen voor leveringen/diensten, werken en het Sociale domein.*

Nooit, in geen enkel geval — In alle gevallen

○ ○ ○ ○ ○ ○ ○

36. Mijn gemeente *heeft toegang tot een juridsche aanbestedingshelpdesk* binnen haar SIS.

Zeer beperkt — Uitstekend

○ ○ ○ ○ ○ ○ ○

Inkoopresultaten van gemeenten door (structurele) samenwerking

Inkoopkosten om een contract af te sluiten en te beheren
Vragen 37-48 van de 56

Onderstaande vragen hebben betrekking op kosten die de gemeente maakt om een contract af te sluiten en te beheren. Hierbij kan gedacht worden aan voorbereidings- en informatiekosten, contract- en contractnalevingskosten. Door gebruik te maken van een SIS kan efficiency leiden tot o.a. lagere kosten.

37. SIS leidt *tot lagere inkoopkosten en transactiekosten van inkoop en aanbestedingstrajecten voor mijn gemeente.*

Zeer beperkt						In zeer hoge mate
○	○	○	○	○	○	○

38. SIS leidt *tot lagere inkoop- en transactiekosten ten behoeve van het bewaken en het managen van contracten, contractmanagement* voor mijn gemeente/organisatie.

Zeer beperkt						In zeer hoge mate
○	○	○	○	○	○	○

39. Het uitvoeren van inkoop- en aanbestedingstrajecten brengt ook management kosten met zich mee.

SIS leidt *tot lagere kosten van het managen van de inkoopfunctie.*

Zeer beperkt, helemaal niet						In zeer hoge mate
○	○	○	○	○	○	○

40. Om inkoop- en aanbestedingstrajecten uit te voeren kan gebruik worden gemaakt van inkoopsoftware.

SIS leidt tot *lagere kosten van ICT (inkoopsoftware) om inkoop- en aanbestedingstrajecten te kunnen uitvoeren voor mijn gemeente.*

Zeer beperkt						In zeer hoge mate
○	○	○	○	○	○	○

41. Voor inkoop- en aanbestedingstrajecten kunnen derden/externen voor specialistische materie of marktkennis worden ingehuurd.

Structurele inkoopsamenwerking leidt *tot lagere kosten voor het inhuren van externen (privaat) t.b.v. inkoop- en aanbestedingstrajecten voor mijn gemeente.*

Zeer beperkt						In zeer hoge mate
○	○	○	○	○	○	○

42. Voor inkoop- en aanbestedingstrajecten kunnen derden/externen voor specialistische juridische kennis worden ingehuurd.

***SIS leidt tot lagere kosten van het inhuren van externe juridische aanbestedingskennis* voor mijn gemeente.**

Zeer beperkt						In zeer hoge mate
○	○	○	○	○	○	○

43. Tijdens de uitvoering van inkoop- en aanbestedingstrajecten kunnen fouten worden gemaakt die hersteld moeten worden. Dit kan gepaard gaan met (transactie)kosten.

SIS voorkomt fouten in de inkoopprocedure voor mijn gemeente.

Zeer beperkt						In zeer hoge mate
○	○	○	○	○	○	○

44. Doorlooptijd is o.a. bepalend voor de transactiekosten bij een inkoop- en aanbestedingstraject.

SIS leidt *tot kortere doorlooptijd* van de uitvoering van inkoop- en aanbestedingstajecten en implementatie van contracten voor mijn gemeente.

Zeer beperkt						In zeer hoge mate
○	○	○	○	○	○	○

45. SIS leidt tot minder rechtszaken (lagere juridische kosten) ten aanzien van aanbestedingsprocedures.

Zeer beperkt						In zeer hoge mate
○	○	○	○	○	○	○

46. SIS leidt tot standaardisatie en uniformiteit in behoefte en specificatie in (zorg) producten, diensten en werken voor mijn gemeente.

Zeer beperkt						In zeer hoge mate
○	○	○	○	○	○	○

47. SIS kan leiden tot uniformiteit en eenduidigheid in functies en vaardigheden van de inkoop specialisten.

SIS leidt tot *standaardisatie en uniformiteit* in de inkoopdienstverlening voor mijn gemeente.

Zeer beperkt						In zeer hoge mate
○	○	○	○	○	○	○

48. Standaardisatie in de inkoop- en aanbestedingsprocessen kan leiden tot kostenbesparingen in de uitvoering hiervan.

SIS leidt tot kostenbesparingen binnen de inkoopprocessen voor mijn gemeente.

Zeer beperkt						In zeer hoge mate
○	○	○	○	○	○	○

Inkoopresultaten van gemeenten door (structurele) samenwerking

Kerntaken en het onderbrengen van taken
Vragen 49-56 van de 56

Doordat gemeenten haar inkoopfunctie (volledig of gedeeltelijk) onderbrengen bij een SIS, kunnen zij zich meer focussen op hun kern activiteiten. Gemeenten en organisaties kunnen zich dan meer richten op de inhoud van (nieuwe) taken die ze bijvoorbeeld via de decentralisaties moeten uitvoeren.

De onderstaande vragen richten zich op het verkrijgen van meer kennis en capaciteit door de SIS. Waardoor gemeenten zich efficienter en effectiever kunnen focussen op de (nieuwe) kernactiviteiten.

49. Het ontwikkelen van nieuwe producten of diensten binnen bijvoorbeeld jeugdzorg, participatiewet en verwerking van huisvuil, gaat vaak gepaard met lange doorlooptijden.

Nieuwe/ Innovatieve dienstverlening en producten *zijn sneller bij de burger* door betrokkenheid van de SIS voor mijn gemeente.

Nee, de betrokkenheid van een SIS heeft geen invloed						Ja, de betrokkenheid van een SIS leidt tot kortere doorlooptijd
○	○	○	○	○	○	○

50. Gemeenten en publieke organisaties hebben soms te maken met niet geplande taken/activiteiten. Deze komen vaak voort uit de maatschappelijke omgeving, zoals politiek en de burger.

Mijn gemeenten of organisatie beschikt over *meer flexibiliteit t.b.v. het realiseren van 'ad hoc' ontstane inkoopbehoefte (geinitieerd door politiek en uiteindelijk voor de burgers)* via de SIS.

Nee, de SIS heeft **geen** invloed op flexibiliteit t.b.v. het realiseren van ad hoc inkoopbehoefte						Ja, de SIS heeft invloed op flexibiliteit t.b.v. het realiseren van ad hoc inkoopbehoefte
○	○	○	○	○	○	○

51. Inkoopactiviteiten onderbrengen bij een gezamenlijke organisiatie kan leiden tot meer efficiency.

Mijn gemeente heeft lagere kosten voor de inkoopfunctie via SIS.

Nee, door de SIS heeft mijn gemeente **geen** lagere kosten voor de inkoopfunctie						Ja, door de SIS heeft mijn gemeente lagere kosten voor de inkoopfunctie
○	○	○	○	○	○	○

52. Mijn gemeente kan zich *meer concentreren op de materie deskundigheid / inhoud* van het in te kopen product, werk of dienst via de SIS.

Nee, door de SIS kan mijn gemeente kan zich **niet** meer concentreren op inhoud						Ja, door de SIS kan mijn gemeente zich meer concentreren op de inhoud
○	○	○	○	○	○	○

53. Het inkoopmanagement proces (besluitvorming) vindt op het juiste niveau in de organisatie en met vaste regelmaat plaats via de SIS, voor mijn gemeente.

Nee, door de SIS vindt het inkoopmanagement niet op het juiste niveau en met vaste regelmaat plaats						Ja, door de SIS vindt het inkoopmanagement op het juiste niveau en met vaste regelmaat plaats
○	○	○	○	○	○	○

54. Het *onderbrengen van de inkoopfunctie* bij de SIS leidt *tot meer innovatie* t.a.v. leveringen/diensten, werken en binnen het sociale domein voor mijn gemeente.

Nee, het onderbrengen van de inkoopfunctie bij de SIS leidt niet tot meer innovatie						Ja, het onderbrengen van de inkoopfunctie bij de SIS leidt tot meer innovatie
○	○	○	○	○	○	○

55. Complexe strategische organisatorische of inhoudelijke inkoopaspecten kunnen worden belegd bij medewerkers van een SIS op strategisch niveau. Bij het onderbrengen van de inkoopfunctie bij een SIS, kan bij complexe of organisatorische aspecten een inkoopmanager van de structurele inkoopsamenwerking nodig zijn.

Mijn gemeente heeft direct beschikking over medewerkers op strategisch niveau (management) via de SIS voor complexe en strategische vraagstukken.

Nee, mijn gemeente heeft geen directe beschikking over medewerkers op strategisch niveau via de SIS						Ja, mijn gemeente heeft directe beschikking over medewerkers op strategisch niveau via de SIS
○	○	○	○	○	○	○

56. Het onderbrengen van de inkoopfunctie bij een SIS kan een reden zijn om een kwetsbare functie veilig te stellen.

Mijn gemeente gebruikt de mogelijkheid om *kwetsbare (inkoop) functies* bij een publieke dienst uit te besteden via de SIS.

Nee, mijn gemeente gebruikt **niet** de mogelijkheid om kwetsbare (inkoop) functies uit te besteden						Ja, mijn gemeente gebruikt de mogelijkheid om kwetsbare (inkoop) functies uit te besteden bij de SIS
○	○	○	○	○	○	○

57. Ik ontvang graag een samenvatting van de bevindingen van het onderzoek.

- ○ Ja
- ○ Nee

Bedankt voor uw reactie.

Met vriendelijke groet,

Maroel Stuijts

Appendix X. Sub-scale consistency

1. Sub-Scale consistency dimension: Resource Dependency Diminishing

With concern to the consistency subscale resource dependence diminishing a Cronbach α coefficient of 0,706 was resumed, which stated an acceptable internal consistency as implied in Table IV-1

Table IV-1

Reliability Statistics: Resource Dependence Diminishing

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,706	,708	2

Moreover, the statistics dimension resource sharing, table….., shows only positive correlations, which anew suggest that each item is measuring the same underlying construct and the corrected item-total correlation is 0,548, above the recommended 0.3 level (Pallant, 2010, p. 100; Pavot et al., 1991).

Thirdly the statistics dimension resource sharing, Table IV-2 item-total statistics shows only positive correlations, which suggest that each item is measuring the same underlying construct and the corrected item-total correlation is above the recommended 0.3 level (Pallant, 2010, p. 100; Pavot et al., 1991).

Table IV-2

Item-Total Statistics: : Resource Dependence Diminishing

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SCPRDT1	4,38	2,721	,548	,300	.
SCPRDT2	5,17	2,330	,548	,300	.

The Cronbach α if deleted, the split-half coefficient and coefficient alpha are not calculated for this subscale dimension because there are only two items, which is too few for a Cronbach α if deleted, the split-half coefficient and coefficient alpha (Green & Salkind, 2014, pp. 293-300).

2) Sub-Scale consistency dimension: Information Asymmetry

With regard to Information Asymmetry subscale a Cronbach α coefficient of 0,890 was returned submitting a satisfactory internal consistency and reliability for the scale as show in Table IV-3.

Table IV-3

Reliability Statistics: Information Asymmetry

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,890	,893	4

Item analyses, the inter-item correlations were conducted on the four items hypothesised to assess Information Asymmetry. Initially, each of the four items were correlated with the total score for Information Asymmetry. All the corrected item-total correlations were positive and greater than 0.30, viewed in Table IV-4

Table IV-4

Item-Total Statistics: Information Asymmetry

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SCPRDT3	13,73	14,398	,816	,699	,838
SCPRDT4	14,08	14,313	,816	,697	,837
SCPRDT5	13,89	14,867	,711	,519	,876
SCPRDT6	13,74	13,865	,706	,508	,882

To finish, two internal consistency estimates of reliability were computed for the Resource sharing scale: a split-half coefficient expressed as a Spearman_Brown corrected correlation and coefficient alpha. For the split-half coefficient, the scale was split into two halves such that the two halves would be as equivalent as possible. In splitting the items/variables, one of the halves included even and odd item/variable of resource sharing. Values for coefficient alpha an the split-half coefficient were the same 0.882 each indicating acceptable reliability, showed in Table IV-5.

Table IV-5

Reliability Statistics: : Information Asymmetry

Cronbach's Alpha	Part 1	Value	,816
		N of Items	2[a]
	Part 2	Value	,806
		N of Items	2[b]
	Total N of Items		4
Correlation Between Forms			,789
Spearman-Brown Coefficient	Equal Length		,882
	Unequal Length		,882
Guttman Split-Half Coefficient			,881

a. The items are: SCPRDT3, SCPRDT5.
b. The items are: SCPRDT4, SCPRDT6.

3) Sub-Scale consistency dimension: Demand Share

Once again a Cronbach α coefficient of 0,708 was returned submitting a satisfactory internal consistency and reliability for the scale as show in Table IV-6.

Table IV-6

Reliability Statistics: Demand Share

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,708	,708	2

The inter-item correlation was also conducted and checked for positive correlations to confirm that separately items were measuring the similar underlying construct. Again correct item-total correlation was above 0.3 (here 0.548) (Green & Salkind, 2014; Pallant, 2010, p. 100).

Table IV-7

Item-Total Statistics: Demand Share

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SCPRDT7	5,30	2,190	,548	,300	.
SCPRDT8	5,17	2,293	,548	,300	.

The Cronbach α if deleted, the split-half coefficient and coefficient alpha are not calculated for this subscale dimension because there are only two items, which is too

few for a Cronbach α if deleted, the split-half coefficient and coefficient alpha (Green & Salkind, 2014, pp. 293-300).

4) Sub-Scale consistency dimension: Reputation

The dimension Reputation contents two items. With regard to Information Asymmetry subscale a Cronbach α coefficient of 0,849 was returned submitting a satisfactory internal consistency and reliability for the scale as show in Table IV-8.

Table IV-8

Reliability Statistics: Reputation

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,849	,849	2

The item-total Statics in Table IV-9, shows analyses on two items which are component of the dimension Reputation. All the correlations were greater than 0.30

Table IV-9

Item-Total Statistics: Reputation

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SCPRDT9	4,66	2,165	,737	,543	.
SCPRDT10	4,80	2,076	,737	,543	.

The Cronbach α if deleted, the split-half coefficient and coefficient alpha are not calculated for this subscale dimension because there are only two items, which is too few for a Cronbach α if deleted, the split-half coefficient and coefficient alpha (Green & Salkind, 2014, pp. 293-300).

5) Sub-Scale consistency dimension: Goal Synchronisation

With concern to the consistency subscale Goal Synchronisation five significant tests are executed.

First a Cronbach α coefficient of 0,482 was resumed, which stated an insufficient consistency for respondents, as implied in Table IV-10, Reliability statistics (Green & Salkind, 2014, p. 297).

Table IV-10

Reliability Statistics: Goal Synchronisation

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,482	,459	5

Secondly, Table IV-11item-total shows Cronbach's Alpha if item deleted, of Cronbach α coefficient of 0.640 if item SCPAT5 will be deleted. Thirdly also the Corrected Item-Total Correlation is negative for item SCPAT 5, which indicates that SCPAT5 is not measuring the same underlying construct in this sub-scale (Green & Salkind, 2014; Pallant, 2010, p. 100). All the other items have positive correlation and are greater than 0.3.

Table IV-11

Item-Total Statistics: Goal Synchronisation

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SCPAT1	17,93	12,846	,356	,478	,356
SCPAT2	17,48	13,333	,412	,526	,331
SCPAT3	17,95	13,124	,305	,286	,394
SCPAT4	18,13	11,881	,422	,278	,300
SCPAT5	18,60	19,438	-,148	,094	,640

Conversely, the occasion of negative values correlated with item SCPAT5 *'My LA recognises that her individual procurement goals are restricted by SCP'*, suggested that this item/question required supplementary investigation and was possibly a negatively expressed question, among other questions of this sub-scale dimension.

The other items/questions SCPAT1, SCPAT2, SCPAT3 and SCPAT4, are more in an objective and neutral way wording, comparing with SCPAT5.

SCPAT1 *"My LA has agreements about Procurement strategy with the participants";*

SCPAT2 *"My LA has agreements about Procurement operation with the participants";*

SCPAT3 *"Regional public agencies procure primarily business besides SCP"*

SCPAT4 *"My LA uses often SCP or other public agencies for her procurement function"*

Nevertheless, comparing SCPAT5 with SCPAT1, SPCAT1 had a positive/neutral position and SPCAT5 a more negative wording. High ranking suits on the confirmation of the proposition of the item, therefore SCPAT5 was not inverted. For the other items, SCPAT1, SCPAT2, SCPAT3, SCPAT4, the corrected item-total correlation was exceeding the mentioned level of 0.3.

Finally two internal consistency estimates of reliability were computed for the Goal Synchronisation scale: a split-half coefficient expressed as a Spearman_Brown corrected correlation and coefficient alpha. For the split-half coefficient, the scale was split into two halves such that the two halves would be as equivalent as possible. In splitting the items/variables, one of the halves included even and odd item/variable of resource sharing. Values for coefficient alpha an the split-half coefficient were the same 0.810 each indicating acceptable reliability, showed in Table IV-12

Table IV-12

Reliability Statistics: Goal Synchronisation

Cronbach's Alpha	Part 1	Value	,126
		N of Items	2[a]
	Part 2	Value	,372
		N of Items	2[b]
	Total N of Items		4
Correlation Between Forms			,681
Spearman-Brown Coefficient	Equal Length		,810
	Unequal Length		,810
Guttman Split-Half Coefficient			,810

a. The items are: SCPAT1, SCPAT3.
b. The items are: SCPAT2, SCPAT4.

6) Sub-Scale consistency dimension: Transparency of Information

Once again the Cronbach α was assessed for the subscale Transparency of Information, which resulted in 0.814 which was more than sufficient (Table IV-13).

Table IV-13

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,814	,813	6

The Table IV-14 shows firstly that the item corrected correlations are positive. Secondly the table showed for SCPAT9 correlation < 0.3, which needed more examination. The item SCPAT9, *"My LA has frequently consultation about procurement policy with member of the SCP"*, had a correlation value 0.275. On the other hand in combination with the overall score of Cronbach α coefficient 0.970 item SCPAT9 has not been removed (Pallant, 2010, p. 100).

Table IV-14

Item-Total Statistics: Transparency of information

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SCPAT6	21,27	41,359	,657	,615	,766
SCPAT7	22,00	42,447	,773	,659	,743
SCPAT8	22,53	42,831	,651	,455	,768
SCPAT9	21,99	52,960	,275	,243	,845
SCPAT10	21,43	49,195	,506	,281	,800
SCPAT11	21,62	43,606	,629	,493	,773

Completely two internal consistency estimates of reliability were calculated for the Goal Synchronisation scale: a split-half coefficient expressed as a Spearman_Brown corrected correlation and coefficient alpha. For the split-half coefficient, the scale was split into two halves such that the two halves would be as equivalent as possible. In splitting the items/variables, one of the halves included even and odd item/variable of Transparency of Information. Values for coefficient alpha an the split-half coefficient were the same 0.870 each demonstrating acceptable reliability, showed in Table IV-12.

Reliability Statistics

Cronbach's Alpha	Part 1	Value	,688
		N of Items	3[a]
	Part 2	Value	,601
		N of Items	3[b]
	Total N of Items		6
Correlation Between Forms			,771
Spearman-Brown Coefficient	Equal Length		,870
	Unequal Length		,870
Guttman Split-Half Coefficient			,868

a. The items are: SCPAT6, SCPAT8, SCPAT10.

b. The items are: SCPAT7, SCPAT9, SCPAT11.

7) Sub-Scale consistency dimension: Procurement Cost

Again, primarily the Cronbach α coefficient of 0.896 demonstrated good internal consistency reliability in the sub-scale Procurement Cost (Table IV-15).

Table IV-15

Reliability Statistics: Procurement Costs

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,896	,899	9

The positive correlations validated, the strength association with the items in this sub-scale. Furthermore the correct item-total correlations of this sub-scale are higher than 0.3. Hence, the variable/items construct of the sub-scale, emphasis strength linear relationship (J. Collis & Hussey, 2014, p. 270). Nevertheless for SCPTC4 Cronbach α coefficient if item deleted showed a marginally increasing of 0,004. Unrushed with the Corrected Item-Total Correlation > 0.3 and the high Cronbach's Alpha, SCPTC4 has not been removed.

Table IV-16

Item-Total Statistics: Procurement Costs

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SCPTC1	32,14	80,419	,785	,699	,875
SCPTC2	33,02	83,949	,596	,461	,889
SCPTC3	32,74	81,544	,755	,611	,877
SCPTC4	33,17	85,295	,484	,316	,900
SCPTC5	32,07	84,019	,705	,738	,882
SCPTC6	32,30	83,111	,686	,740	,883
SCPTC7	32,23	79,207	,719	,690	,880
SCPTC8	33,40	85,392	,566	,391	,892
SCPTC9	32,75	81,363	,678	,655	,883

At least two internal consistency estimates of reliability were calculated for the Procurement Cost sub-scale: a split-half coefficient expressed as a Spearman_Brown corrected correlation and coefficient alpha. For the split-half coefficient, the scale was split into two halves such that the two halves would be as equivalent as possible. In splitting the items/variables, one of the halves included even and odd item/variable of Procurement Costs. Values for coefficient alpha and the split-half coefficient were approximately the same 0.87 each demonstrating acceptable reliability, showed in Table IV-17.

Table IV-17

Reliability Statistics: Procurement Costs

Cronbach's Alpha	Part 1	Value	,883
		N of Items	5[a]
	Part 2	Value	,712
		N of Items	4[b]
	Total N of Items		9
Correlation Between Forms			,774
Spearman-Brown Coefficient	Equal Length		,872
	Unequal Length		,874
Guttman Split-Half Coefficient			,849

a. The items are: SCPTC1, SCPTC3, SCPTC5, SCPTC7, SCPTC9.
b. The items are: SCPTC2, SCPTC4, SCPTC6, SCPTC8.

8) Sub-Scale consistency dimension: Standardisation

Concerning to the consistency of the sub-scale Standardisation (Table IV-18), which contents three variables/items, the Cronbach α coefficient of 0,856 showed sufficient consistency reliability in the sub-scale.

Table IV-18

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,856	,857	3

Completed with positive Corrected Item-Total Correlation no variables/items have been removed. Subsequent, correlation contents value were greater than 0.3 (Green & Salkind, 2014, p. 311). At least, Cronbach's Alpha if Item Deleted were no greater by deleting one of the variables/items than the Cronbach Alpha 0.856. So no variable/item has been removed (Table IV-19).

Table IV-19

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SCPTC10	9,29	7,103	,710	,507	,817
SCPTC11	9,14	6,521	,752	,566	,777
SCPTC12	9,45	6,463	,727	,532	,802

The split-half coefficient and coefficient alpha are not calculated for this subscale dimension because there are only three items, which is too few for a, the split-half coefficient and coefficient alpha (Green & Salkind, 2014, pp. 293-300).

9) Sub-Scale consistency dimension: Value

Concerning to the consistency of the sub-scale Value (Table IV-20), which contents four variables/items, the Cronbach α coefficient of 0,740 showed necessary consistency reliability in the sub-scale.

Table IV-20

Reliability Statistics: Value

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,740	,744	4

As consequence of calculations the Table IV-21 demonstrate positive corrected item-total Correlations for SPCCT1, SPCCT2, SPCCT3 and SPCCCT6. Supplemented with corrected item-total correlations greater than 0.3, indicated for reliable construct (J. Collis & Hussey, 2014; Green & Salkind, 2014; Pallant, 2010). At least, Cronbach's Alpha if Item Deleted were no superior by deleting one of the variables/items than the Cronbach Alpha 0.740. So no variable/item has been removed.

Table IV-21

Item-Total Statistics: Value

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SCPCCT1	11,14	13,169	,636	,493	,628
SCPCCT2	11,04	12,011	,606	,454	,636
SCPCCT3	10,31	13,541	,453	,256	,729
SCPCCT6	10,74	14,319	,456	,308	,722

Finally two internal consistency estimates of reliability were computed for the Value scale: a split-half coefficient expressed as a Spearman_Brown corrected correlation and coefficient alpha. For the split-half coefficient, the scale was split into two halves such that the two halves would be as equivalent as possible. In splitting the items/variables, one of the halves included even and odd item/variable of resource sharing.

Completely two internal consistency estimates of reliability were calculated for the Goal Synchronisation scale: a split-half coefficient expressed as a Spearman_Brown corrected correlation and coefficient alpha. For the split-half coefficient, the scale was split into two halves such that the two halves would be as equivalent as possible. In splitting the items/variables, one of the halves included even and odd item/variable of Transparency of Information. Values for coefficient alpha an the split-half coefficient were the same 0.834 each indicating acceptable reliability, showed in Table IV-22.

Table IV-22

Reliability Statistics: Value

Cronbach's Alpha	Part 1	Value	,477
		N of Items	2[a]
	Part 2	Value	,470
		N of Items	2[b]
	Total N of Items		4
Correlation Between Forms			,716
Spearman-Brown Coefficient	Equal Length		,834
	Unequal Length		,834
Guttman Split-Half Coefficient			,834

a. The items are: SCPCCT1, SCPCCT3.
b. The items are: SCPCCT2, SCPCCT6.

10) Sub-Scale consistency dimension: Capabilities

For the last sub-scale, Capabilities, again 5 assessments have been executed. Firstly the Cronbach α coefficient of 0.843 suggested that the scale scores are reasonably reliable for respondents in present study.

Table IV-23

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,843	,846	4

Subsequently, the positive Corrected Item-Total Correlation and the corresponding value of greater than 0.3 performed, that each item is measuring the same underlying construct. The corrected item-total correlations are above recommended 0.3 level (Pallant, 2010, p. 100; Pavot et al., 1991). Fourthly Cronbach's Alpha if Item Deleted were no superior by deleting one of the variables/items than the Cronbach Alpha 0.843, hence no variable/item has been removed.

Table IV-24

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SCPCCT4	12,51	18,301	,698	,503	,794
SCPCCT5	12,82	18,457	,642	,431	,816
SCPCCT7	13,06	17,389	,707	,514	,788
SCPCCT8	13,00	15,810	,681	,480	,805

Completely two internal consistency estimates of reliability were calculated for the Goal Synchronisation scale: a split-half coefficient expressed as a Spearman_Brown corrected correlation and coefficient alpha. For the split-half coefficient, the scale was split into two halves such that the two halves would be as equivalent as possible. In splitting the items/variables, one of the halves included even and odd item/variable of Transparency of Information. Values for coefficient alpha a the split-half coefficient were the same 0.851 each validating adequate reliability, showed in Table IV-25

Table IV-25

Reliability Statistics: Capabilities

Cronbach's Alpha	Part 1	Value	,759
		N of Items	2[a]
	Part 2	Value	,687
		N of Items	2[b]
	Total N of Items		4
Correlation Between Forms			,741
Spearman-Brown Coefficient	Equal Length		,851
	Unequal Length		,851
Guttman Split-Half Coefficient			,850

a. The items are: SCPCCT4, SCPCCT7.
b. The items are: SCPCCT5, SCPCCT8.

Appendix XI. Skewness and Kurtosis analysis

Table Skewness and Kurtosis Analysis

Skewness and Kurtosis analysis

	N	Minimum	Maximum	Mean		Std. Deviation		Skewness	Kurtosis
	Statistic	Statistic	Statistic	Statistic		Statistic	Std. Error	Sta	Std. Error
SCPRBT1	110	1	6	4.34		1.396	-.479	.230	-.660	.457
SCPRBT2	109	1	7	5.35		1.696	-.923	.231	-.042	.459
SCPRBT3	107	1	7	5.32		1.886	-1.038	.234	-.040	.463
SCPRBT4	109	1	7	4.69		1.631	-.434	.231	-.514	.459
SCPRBT5	108	1	7	4.65		1.584	-.521	.233	-.579	.461
SCPRBT6	107	1	7	4.51		1.568	-.527	.234	-.349	.463
SCPRBT7	106	1	7	4.24		2.012	-.266	.235	-1.341	.465
SCPRBT8	108	1	7	4.02		1.829	-.047	.233	-1.158	.461
SCPRBT9	109	1	7	4.39		1.509	-.748	.231	-.220	.459
SCPRDT1	97	1	7	5.18		1.521	-.920	.245	.564	.485
SCPRDT2	96	1	7	4.38		1.650	-.608	.246	-.279	.488
SCPRDT3	96	1	7	4.75		1.353	-.625	.246	.494	.488
SCPRDT4	95	1	7	4.40		1.356	-.556	.247	.068	.490
SCPRDT5	95	1	7	4.62		1.423	-.680	.247	.000	.490
SCPRDT6	94	1	7	4.73		1.560	-.604	.249	-.082	.493
SCPRDT7	95	1	7	5.17		1.506	-.961	.247	.520	.490
SCPRDT8	95	1	7	5.26		1.510	-1.161	.247	1.040	.490
SCPRDT9	96	1	7	4.80		1.441	-.744	.246	.031	.488
SCPRDT10	96	1	7	4.66		1.471	-.678	.246	-.031	.488
SCPAT1	92	1	7	4.53		1.620	-.709	.251	-.276	.498
SCPAT2	92	1	7	5.01		1.410	-.789	.251	.594	.498
SCPAT3	89	1	7	4.57		1.651	-.574	.255	-.418	.506
SCPAT4	91	1	7	4.36		1.683	-.450	.253	-.650	.500
SCPAT5	90	1	7	3.93		1.364	-.040	.254	-.551	.503
SCPAT6	87	1	7	4.80		2.068	-.653	.258	-.829	.511
SCPAT7	88	1	7	4.17		1.750	-.359	.257	-.824	.508
SCPAT8	86	1	7	3.59		1.894	.172	.260	-1.231	.514
SCPAT9	89	1	7	4.13		1.772	-.209	.255	-.927	.506
SCPAT10	86	1	7	4.76		1.586	-.945	.260	.226	.514
SCPAT11	88	1	7	4.53		1.881	-.590	.257	-.798	.508
SCPTC1	89	1	7	4.58		1.444	-.670	.255	-.073	.506
SCPTC2	89	1	7	3.70		1.562	-.027	.255	-1.005	.506

SCPTC3	89	1	6	4.00	1.438	-.586	.255	-.574	.506
SCPTC4	87	1	7	3.60	1.653	-.026	.258	-.937	.511
SCPTC5	89	1	7	4.56	1.406	-.682	.255	.153	.506
SCPTC6	87	1	7	4.41	1.427	-.424	.258	-.476	.511
SCPTC7	89	1	7	4.52	1.603	-.691	.255	-.050	.506
SCPTC8	89	1	6	3.39	1.474	-.015	.255	-1.045	.506
SCPTC9	85	1	7	3.94	1.599	-.403	.261	-.882	.517
SCPTC10	87	1	7	4.64	1.347	-.752	.258	.103	.511
SCPTC11	88	1	7	4.77	1.428	-.920	.257	.243	.508
SCPTC12	89	1	7	4.48	1.455	-.736	.255	-.252	.506
SCPCCT1	89	1	6	3.30	1.473	.003	.255	-.849	.506
SCPCCT2	88	1	7	3.44	1.674	.109	.257	-.825	.508
SCPCCT3	87	1	7	4.11	1.617	-.393	.258	-.641	.511
SCPCCT4	88	1	7	4.65	1.486	-1.026	.257	.419	.508
SCPCCT5	85	1	7	4.31	1.566	-.716	.261	-.480	.517
SCPCCT6	84	1	7	3.68	1.474	-.117	.263	-.441	.520
SCPCCT7	87	1	7	4.07	1.627	-.346	.258	-.729	.511
SCPCCT8	88	1	7	4.20	1.895	-.353	.257	-1.057	.508
Valid (listwise)	N59								

Appendix XII. Factor analyses

1) Reliability measurements

First has been analysed the KMO, Kaiser-Meyer-Olkin test (Cerny & Kaiser, 1977; H. Kaiser, 1974) to verify that the data is suitable for factor analysis. The test measures sampling adequacy for each variable in the model and for the complete model. The statistic is a measure of the proportion of variance among variables that might be common variance. The value is 0,643, which indicates that the sample size is sufficient to give reliable results (J. Collis & Hussey, 2014, p. 280; Pallant, 2010). The second verify test for this analyses, was the Bartlett's (Bartlett, 1954) test for sphericity, which shows that the sphericity is significant appropriate at $p < 0.05$ for the factor analysis (Pallant, 2010, p. 183).

Table D-1

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,643
Bartlett's Test of Sphericity	Approx. Chi-Square	3655,185
	df	1225
	Sig.	,000

Subsequently the components identified in Table D-1, the rotated components analysis, are supported by the correlation matrix. Principal components analysis revealed the presence of eleven components with eigenvalues exceeding 1, clarifying 42.5%, 6.1%, 5.0%, 4.3%, 3.6%, 3.2%, 3.0%, 2,6%, 2,5%, 2,2% and 2.0% of the variance respectively.

2) Correlation matrix

Appearance at the Correlation Matrix (R) produced on the Table D-2 "A matrix that is factorable should include several substantial correlations. "If no correlation exceeds .30, use of FA is questionable because there is probably nothing to factor analyse" (Tabachnick & Fidell, 2006). Hence for factor analysis, the correlation should show at lease some correlations or r => 0,3. The correlation matrix < appendix> represented correlations coefficients of 0.3 and above.

Table D-2

Rotated Component Matrix[a]

	Component										
	1	2	3	4	5	6	7	8	9	10	11
SCPRBT2	,781										
SCPRBT3	,767										
SCPRBT1	,729		,342								
SCPRBT5	,675						,313				
SCPRDT1	,638	,331									
SCPTC11	,611	,449		,311							
SCPAT11	,591					,513					
SCPCCT4	,562	,399			,331						
SCPRDT7	,534	,529	,302								
SCPRBT4	,530			,304					,399	,379	
SCPRBT9	,529		,465								
SCPRBT8	,509			,385					,365		
SCPRBT7	,500			,427							,437
SCPCCT8	,492	,304			,421			,325			
SCPTC7	,489	,459	,321			,337					
SCPRBT6	,437	,359	,428				,343				
SCPTC3		,805									
SCPTC12		,719									
SCPCCT3	,363	,717									
SCPTC1		,669	,331								
SCPTC6		,643		,360							
SCPTC5		,605		,378							
SCPTC2		,568					,390				
SCPTC4		,516		,470							
SCPTC10		,499		,339							-,368
SCPRDT5	,402	,437	,387								
SCPTC9	,330	,436								,343	-,370
SCPRDT8	,327		,741								
SCPRDT10			,731	,436							
SCPRDT9		,311	,715								
SCPRDT6	,355		,700								
SCPRDT2			,683								
SCPRDT4	,481	,389	,532								
SCPRDT3	,455		,528								
SCPAT2				,815							
SCPAT1				,751							
SCPAT10				,485			,331		,345		
SCPCCT1					,775						
SCPCCT6					,709						-,328
SCPCCT2		,306			,610						,366
SCPTC8	,309	,446			,556						
SCPCCT7	,301				,403	,327	,399				
SCPAT8						,739			,304		
SCPAT7	,369					,710					
SCPAT6	,386					,686					
SCPAT3							,664	,358			
SCPCCT5	,309				,340	,329	,629				
SCPAT4								,783			
SCPAT9									,835		
SCPAT5										-,816	

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]
a. Rotation converged in 20 iterations.

3) Factor analysis

The executed procedure is an often-applied statistical procedure in quantitative research. Parker et al. (Parker, Chang, & Thomas, 2016) find evidence in their research, the path analysis group, in which the factor analysis in the period 2010-2014 has been more often applied as in the period 2006-2009.
The aim of factor analysis is to expose any latent variables that cause the noticeable variables to determine. Factor extraction technique widely used.

There are different types of factor analysis, each with its own purpose. The same analysis can thus be used in the same set of items in order to determine the underlying structure (exploratory), or to predict specific pattern of relationships based on theory or preliminary analytical results
The first distinction is made between common factor analysis and component analysis; wherein component analysis is typically used to summarize multiple variables together in a kind of super-variable; common factor aims to describe overlap between variables.

By increasing the frequency, these terms are used in order to show a difference between different types of analytical tools, instead of between different topics of research. The term confirmatory factor analysis refers to methods that are based on the structural equation model, SEM (structural equation modeling). Standard factor analysis methods can be used in both the exploratory as in the confirmatory technique confirmatory.

4) Technical aspects of factor analysis: factor extraction technique

There are a several number of factor extraction approaches obtainable. Henson, Capraro and Capraro (Henson, Capraro, & Capraro, 2004) classified generally as either a components or common factor approach.
Principal components analysis (PCA) and principal axis factoring (PAF) with predictable communalities tend to be most common high-quality extraction strategies used (Green & Salkind, 2014; S. M. Kennedy, Grossman, & Ehrenreich-May, 2016; Parker et al., 2016)

PCA produces components, which characterises the linear combinations of variables that retain as much information as possible about the original measured variables. PAFs,

though, produce factors that reveal the latent structure of the original measured variables (Parker et al., 2016; Reio & Shuck, 2014).
Although the terms are often used interchangeably for ease of discussion, there are "theoretical and semantically differences" between the two extraction models (S. M. Kennedy et al., 2016).

The main difference between the two methods is their particular drive and objectives. The aim of a PCA is to reduce large numbers of variables into something more manageable that retains as much as possible of a set of variables' observed variance, with little attention to interpreting latent constructs (Berenson & Levine, 1996; Green & Salkind, 2014). Thus, all the observed variables' variance is analysed in a PCA. Conversely, the aim of PAF is to "understand the latent (undetected) variables that account for relationships among measured variables"(Straub et al., 2004). PAF uses communality estimates, which have been measured of shared variance with values between 0 and 1, instead of one in the correlation matrix's diagonal. A PCA procedures ones that represent both common and unique variance in the observed variables, to eliminate measurement error due to common variance (Blaikie, 2010; Straub et al., 2004).
In this research the purpose is to recognise the latent structure of a set of variables, PAF would be most appropriate. PCA and PAF often produce equivalent results; it would make more sense using PAF in most cases because, generally, researchers want to better understand a set of variables' in a more latent structure (Bordens & Abott, 2002, pp. 425-435; R.L. Gorsuch, 1990).
By applying both methods, the results can be heavily biased by non-normally distributed data and outliers (Green & Salkind, 2014; Pallant, 2010). As showed in paragraph 3.6.3., the quantitative data in this part of the study in normally distributed.

5) How many Factors to be retained

For determining the factors that will be retained three tests have been conducted. Namely the eigenvalues >1 of, secondly the scree test of Catell (Cattell, 1966) and parallel analysis (Horn, 1965). Add value of parallel analysis is also recognised by Pallant (Pallant, 2010, pp. 192-194).

The non-attendance in most statistical software packages is to retain all factors with eigenvalues greater than 1.0. There is broad harmony in the literature that this is among the least truthful methods for selecting the number of factors to retain (Velicer & Jackson, 1990).

Factor eigenvalues, eigenvalues are an index of the variance explained by a factor, greater than one are considered interpretable (H. F. Kaiser, 1956). Gorsuch (R.L. Gorsuch, 1983), followed by Kahn (Kahn, 2006) made an additional statement to this theory with that, the percentage of variance enlightened by each factor should be reported, as well as item communalities related to the rotated factors. As Bartlett's chi-square test (Bartlett, 1954) is heavily influenced by sample size.

Both MAP and parallel analyses have been found to be relatively accurate factor retention rules, with parallel analysis emerging as the most accurate (Fabrigar et al., 1999; Henson et al., 2004). Parallel analysis compares sample data eigenvalues to eigenvalues that would be expected from random data. The factors with eigenvalues larger than the random eigenvalues are retained. Because the procedure remains absent in most statistical packages. Besides several manual calculation options, the procedure has limited use in social science research (Kahn, 2006). In this part of the research has been focused on the EV > 1 rule, scree test, and a priori theory for the purposes of this discussion as they are by far the most common methods used by social science researchers. For triangulation, also a manual parallel analysis calculation has been conducted.

Based on Kaiser (H. Kaiser, 1974) criterion eigenvalues must be > 1. Therefore, components that have eigenvalue > 1 are interested in this analyses.
The dimensionality of the 50 items from the SCP was analyses using maximum PCA analyses. Table D-3 shows the actual factors that were extracted. Analysing the section marked "Rotation Sums of Squared Loadings," it shows those factors that met your cut-off criterion (extraction method). In this case, there were eleven factors with eigenvalues greater than 1. SPSS always extracts as many factors initially as there are variables in the dataset, but the rest of these didn't make the grade. The "% of variance" column expresses how much of the total variability (in all of the variables together) can

be accounted for by each of these summary scales or factors. Factor 1 accounts for 41.953% of the variability in all 50 variables.

Table D-3

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	21,248	42,496	42,496	20,977	41,953	41,953	7,776	15,552	15,552
2	3,068	6,136	48,632	2,779	5,559	47,512	6,597	13,194	28,746
3	2,524	5,047	53,679	2,207	4,413	51,925	4,781	9,562	38,307
4	2,174	4,347	58,026	1,900	3,800	55,725	3,191	6,382	44,689
5	1,811	3,622	61,648	1,507	3,015	58,739	3,118	6,235	50,924
6	1,646	3,292	64,941	1,321	2,641	61,381	2,855	5,711	56,635
7	1,496	2,991	67,932	1,168	2,335	63,716	1,949	3,897	60,532
8	1,335	2,671	70,602	1,013	2,026	65,742	1,468	2,935	63,468
9	1,234	2,468	73,071	,913	1,825	67,567	1,377	2,755	66,222
10	1,114	2,228	75,299	,807	1,614	69,181	1,275	2,551	68,773
11	1,024	2,048	77,347	,724	1,448	70,629	,928	1,856	70,629
….									
50									

Extraction Method: Principal Axis Factoring.

Catell's scree test analysis (Cattell, 1966) is a graphical method where the number of eigenvalues is plotted in sloping order alongside the number of factors. The researcher is inspecting and finding a visual "elbow" in the graph where there is a distinct transition from large to small eigenvalues. Unfortunately, a clear elbow is not always recognisable. Accordingly, the researcher is forced to make a vague subjective decision about the number of factors to retain (Ruscio & Roche, 2012).

The scree plot lead to a slightly different conclusion, it demonstrations the slope of this curve levels out after just three – eight factors, rather than eleven. Interesting is that instead of eleven factors" three –eight factors lead to fewer errors when factor loadings were estimated. Identifying too many factors might lead to the conception of constructs with tiny theoretical value (Ruscio & Roche, 2012, p. 199). Thus, in this EFA has been triangulate the factor extraction results of the EV > 1 rule and scree test and parallel analysis with the theory related to this study, supporting the research.

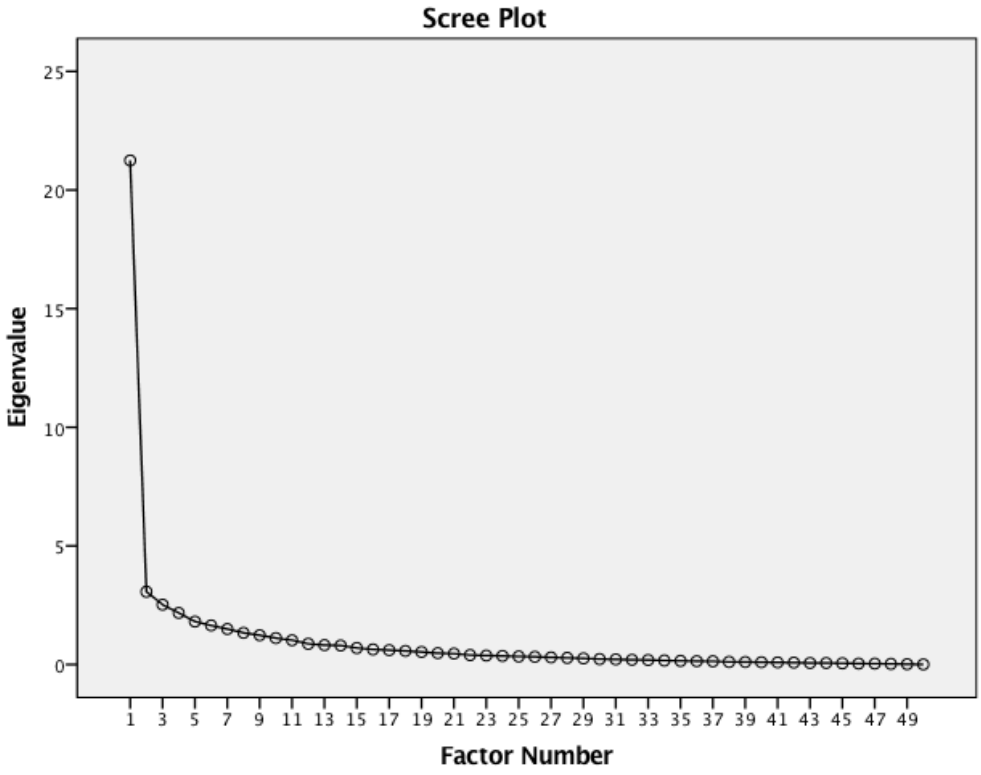


Figure D-1

To determine the number of factors a parallel analysis has been executed. This web-based program calculated the average eigenvalues for these 1000 randomly generated samples. The results are demonstrated in Table D-4 and support the decision form the scree plot to retain only three factors for further investigation.

Table D-4

Comparison of eigen values from PCA and criterion values from parallel analysis

Component number	Actual eigenvalue from pca	Criterion value form parallel analysis	Decision
1	21.248	2.731635	Accept
2	3.068	2.546789	Accept
3	2.524	2.360255	Accept
4	2.174	2.246918	Accept/Reject
5	1.811	2.136141	Accept/Reject
6	1.646	2.028405	Accept/Reject
7	1.496	1.941067	Reject
8	1.335	1.855154	Reject
9	1.234	1.768941	Reject
10	1.114	1.701408	Reject
11	1.024	1.634360	Reject

Table D-5 suggest for eleven latent variables,

Table D-5

Rotated Component Matrix[a]

	Component										
	1	2	3	4	5	6	7	8	9	10	11
SCPRBT2	,781										
SCPRBT3	,767										
SCPRBT1	,729		,342								
SCPRBT5	,675						,313				
SCPRDT1	,638	,331									
SCPTC11	,611	,449		,311							
SCPAT11	,591					,513					
SCPCCT4	,562	,399			,331						
SCPRDT7	,534	,529	,302								
SCPRBT4	,530			,304					,399	,379	
SCPRBT9	,529		,465								
SCPRBT8	,509			,385					,365		
SCPRBT7	,500			,427							,437
SCPCCT8	,492	,304			,421			,325			
SCPTC7	,489	,459	,321			,337					
SCPRBT6	,437	,359	,428				,343				
SCPTC3		,805									
SCPTC12		,719									
SCPCCT3	,363	,717									
SCPTC1		,669	,331								
SCPTC6		,643		,360							
SCPTC5		,605		,378							
SCPTC2		,568					,390				
SCPTC4		,516		,470							
SCPTC10		,499		,339							-,368
SCPRDT5	,402	,437	,387								
SCPTC9	,330	,436								,343	-,370
SCPRDT8	,327		,741								
SCPRDT10			,731	,436							
SCPRDT9		,311	,715								
SCPRDT6	,355		,700								
SCPRDT2			,683								
SCPRDT4	,481	,389	,532								
SCPRDT3	,455		,528								
SCPAT2				,815							
SCPAT1				,751							
SCPAT10				,485			,331		,345		
SCPCCT1					,775						
SCPCCT6					,709						-,328
SCPCCT2		,306			,610						,366
SCPTC8	,309	,446			,556						
SCPCCT7	,301				,403	,327	,399				
SCPAT8						,739			,304		
SCPAT7	,369					,710					
SCPAT6	,386					,686					
SCPAT3							,664	,358			
SCPCCT5	,309				,340	,329	,629				
SCPAT4								,783			
SCPAT9									,835		
SCPAT5										-,816	

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]
a. Rotation converged in 20 iterations.

Appendix XIII. Regression analyses

Factor 2: "Cost reduction by the SCP" has been put in the multiple regression model for the dependent variable. Variables have been moved as independent variables to the model. The description of the values / items are viewed below:

- SCPRDT7 LAs have more procurement experts available by the SCP, thereby less dependence of external
- SCPTC3 LAs have less management costs for the procurement function by the SCP
- SCPTC12 LAs have more financial cost savings by the SCP
- SCPCCT3 LAs have lower costs through outsourcing procurement function by the SCP
- SCPTC1 LAs have lower procurement and transaction costs by the SCP
- SCPTC6 External-independent costs of legal knowhow of procedures or contracts
- SCPTC5 LAs have fewer costs for external procurement consulting by the SCP
- SCPTC2 LAs have lower procurement management costs by the SCP
- SCPTC4 LAs have lower procurement IT cost by the SCP

1) Linear regression "Cost reduction by the SCP"

1.1) Checking the assumptions

For determining these assumptions, the data have been checked on outliers, normality, homoscedasticity, independence of residuals and linearity. The normal probability plot of the regression standardised residual and the scatterplot were investigated. The P-P plot in figure 3-4 shows points in a reasonably straight diagonal line form bottom left tot top right. This indicates no major deviations form normality. The homoscedasticity requires that the variation around the line of the regression is constant for all values of X. Also the scatterplot, showed no systematic pattern to your residuals values. Correspondingly the statement of Tabachnick and Fidell (Tabachnick & Fidell, 2006), the scatterplot shows in 3-5, that the values contents minimal of outlying residuals of more than 3.3 or less than -3.3.

For controlling the multicollinearity the VIF, variance inflationary factor, and Tolerance has been checked for each explanatory variable. If a set of explanatory variable are uncorrelated, then the VIF will we be equal to 1. If the set were highly intercorrelated, then VIF might even exceed 10. Marquardt (1980) suggests that if VIF is > 10, there is too much correlation between variable and the other explanatory variables. However Snee (1973) suggest a more conservative criterion that would imply alternatives to least squares regression if the maximum VIF, were to exceed 5. Examining the data of Factor 1, Resource sharing, noted of table 3-49, the VIF (2 < VIF < 6). As well of conservative as the progressive stream, the VIF, the conclusion has been made that there is no reason to suspect any multicollinearity for variable Resource Sharing.

The parameter tolerance has been checked on the value > 0.10 if not this indicates a high multiple correlations with other variables, suggesting the possibility on multicollinearity. The tolerance in table… is > 0.10.

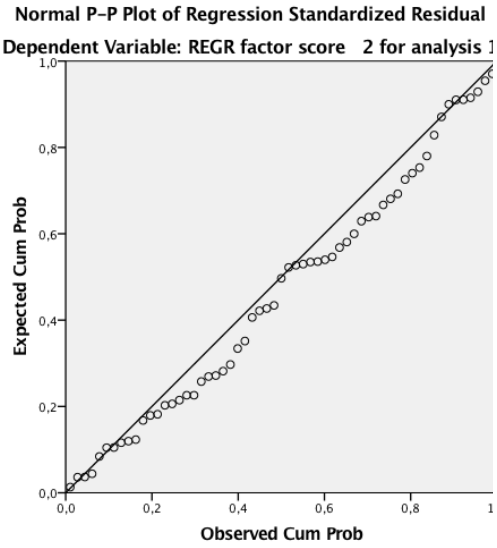


Figure E-1

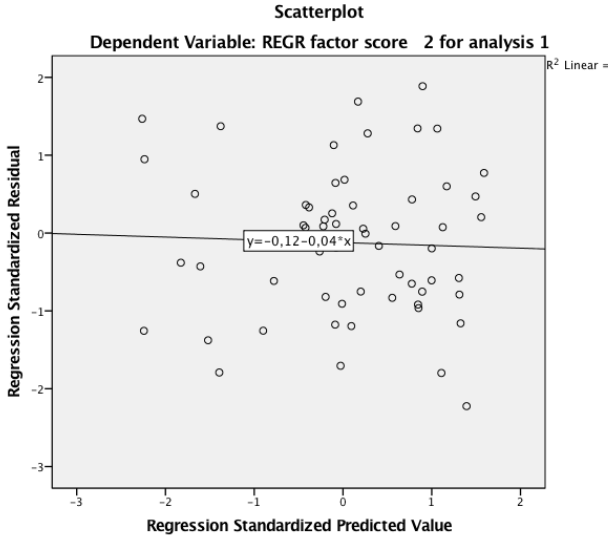


Figure E-2

1.2) Research questions

Secondly, research questions had been set up to determine the goal of the multiple regression analysis.

Research Question1:

How well do the measures of 9 independent variables / items predict perceived "Procurement costs by the SCP"? How much variance in perceived "Procurement Costs (internal) by the SCP" can be explained by scores on these 9 scales?

Research Question2:

Which is the best predictor of "Procurement costs (internal) by the SCP"?

Towards exploring these two questions, a standard multiple regression will be performed. In this model have been put variables / items which have been uncovered with the factor analysis of paragraph 3.5. Consequently, for the procedure of conducting this analysis is followed of Pallant (Pallant, 2010, pp. 153-162).

1.3) Evaluating the model

The third step in the multiple regression procedure of Pallant (Pallant, 2010, pp. 160-161) starts with analysing of the Model Summary viewed in Table The R Square and the Adjusted R Square presented a high value of 0.733 and 0.683 explains 73.3 and 68.3 per cent of the variance in perceived "Procurement Costs (internal) by the SCP". Tabachnick and Fidell (Tabachnick & Fidell, 2006), explain this high value to a small sample. On the other hand other statisticians (Berenson & Levine, 1996; Bierman et al., 1991, pp. 66-69;713-780) are debating about how high should R-squared be. In this study the objective of this analysis main goal is to determine which predictors are statistically significant and how changes in the predictors relate to changes in the response variable, so R-squared is less irrelevant (Berenson & Levine, 1996; Green & Salkind, 2014).

However the regression equation with all sixteen strength predictors was significantly related to the "Procurement Costs (internal) by the SCP" index, R2 =0.733 adjusted 0.683.

Table E-1

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,856[a]	,733	,683	,55838942

a. Predictors: (Constant), SCPTC4, SCPTC1, SCPTC6, SCPRDT7, SCPTC2, SCPCCT3, SCPTC5, SCPTC3, SCPTC12

b. Dependent Variable: FAC2_1

The ANOVA in Table E-2 indicates that the model as a whole is significant Sig.= .000.

Table E-2

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41,847	9	4,650	14,912	,000[b]
	Residual	15,278	49	,312		
	Total	57,125	58			

a. Dependent Variable: FAC2_1
b. Predictors: (Constant), SCPTC4, SCPTC1, SCPTC6, SCPRDT7, SCPTC2, SCPCCT3, SCPTC5, SCPTC3, SCPTC12

1.4) Evaluating each of the independent variables

Anew primarily has been checked the value of the variables in Table E-3 the column marked sig.**.** This value must be not greater than 0.05, formerly the variable is making a significant unique contribution to the prediction of the dependent variable.

The marked variables have a significant unique contribution to the prediction of the dependent variable. Thereafter, interesting is comparing the contribution of each independent variable, wherefore the Beta of the marked had been checked.

Table E-3

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-2,669	,307		-8,693	,000	-3,285	-2,052					
	SCPRDT7	-,061	,073	-,093	-,837	,406	-,208	,086	,544	-,119	-,062	,445	2,247
	SCPTC3	,381	,095	,552	4,023	,000	,191	,572	,801	,498	,297	,289	3,455
	SCPTC12	,163	,100	,238	1,623	,111	-,039	,364	,703	,226	,120	,253	3,949
	SCPCCT3	,023	,078	,037	,296	,769	-,133	,179	,664	,042	,022	,342	2,927
	SCPTC1	-,062	,094	-,090	-,660	,512	-,251	,127	,643	-,094	-,049	,292	3,421
	SCPTC6	,182	,094	,262	1,930	,050	-,007	,372	,666	,266	,143	,297	3,368
	SCPTC5	,034	,097	,048	,347	,730	-,161	,228	,623	,049	,026	,290	3,453

	SCPTC 2	-,002	,065	-,003	-,030	,976	-,133	,129	,516	-,004	-,002	,519	1,925
	SCPTC 4	,005	,056	,009	,095	,925	-,107	,118	,445	,014	,007	,631	1,585

a. Dependent Variable: FAC2_1

1.5) Recap

In the final model SCPTC3 and SCPTC6 have strength relation with the Factor 2, Procurement Costs and are determined explainable in this latent variable.

SCPTC3 (*b** 0.552, $p < .001$), *Reducing of procurement management costs to manage the procurement function*, have been recognised by the LAs as the most significant value of the dimension Resource Sharing of the SCP to perform the procurement function.

SCPTC6 (*b** 0.262, $p = .05$), *SCP leads to lower costs of consulting legal external expertise*, have been seen by the LAs as the second most significant value of the dimension Resource Sharing produced by the SCP.

2) Linear regression "Demand share, Reputation, Information asymmetry, Resource dependence diminishing, Access to external power by the SCP"

Factor 3 has been put in the multiple regression model for the dependent variable. Variables have been moved as independent variables to the model. The description of the values / items are viewed below:

- SCPRDT8 LAs have together more volume in the market by the SCP
- SCPRDT10 LAs governments uses the legitimacy by the SCP
- SCPRDT9 LAs government hitchhike with collaborative brand of the SCP
- SCPRDT6 Procurement processes are more transparencies by the SCP
- SCPRDT2 LAs have more buying power to strategic contract terms by the SCP
- SCPRDT4 LAs have more control over information/position in the communication flow by the SCP
- SCPRDT3 LAs have more awareness of the alternative specifications/demands by the SCP

2.1) Checking the assumptions

For determining these assumptions, the data have been tested on outliers, normality, homoscedasticity, independence of residuals and linearity. The normal probability plot of the regression standardised residual and the scatterplot coexisted examined. The P-P plot in figure 3-6 shows points in a judiciously straight diagonal line form bottom left tot top right. This implies no major deviations from normality. The homoscedasticity requires that the variation around the line of the regression is constant for all values of X. Also the scatterplot showed in figure 3-7, no systematic pattern to the residuals values. Correspondingly the statement of Tabachnick and Fidell (Tabachnick & Fidell, 2006), the scatterplot shows that the values contents minimal of outlying residuals of more than 3.3 or less than -3.3.

For controlling the multicollinearity the VIF, variance inflationary factor, and Tolerance has been checked for each explanatory variable. If a set of explanatory variables are uncorrelated, then the VIF will we be equal to 1. If the set were highly intercorrelated, then VIF might even exceed 10. Marquardt (1980) suggests that if VIF is > 10, there is too much correlation between variable and the other explanatory variables. However Snee (1973) suggest a more conservative criterion that would emply alternatives to least squares regression if the maximum VIF, were to exceed 5. Examining the data of Factor 1, Resource sharing, noted of table 3-52, the VIF ($2 < VIF < 6$). As well of conservative as the progressive stream, the VIF, the conclusion has been made that there is no reason to suspect any multicollinearity for variable Resource Sharing. The values have shown in table 3-52, grey shaded.

The parameter tolerance has been checked on the value > 0.10 if not this indicates on high multiple correlations with other variables, suggesting the possibility on multicollinearity. The tolerance in table… is > 0.10. The value have shown in table 3-52, grey shaded.

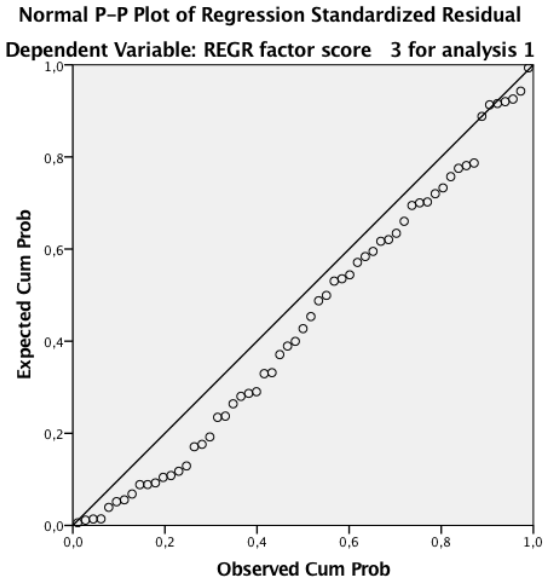


Figure E-3

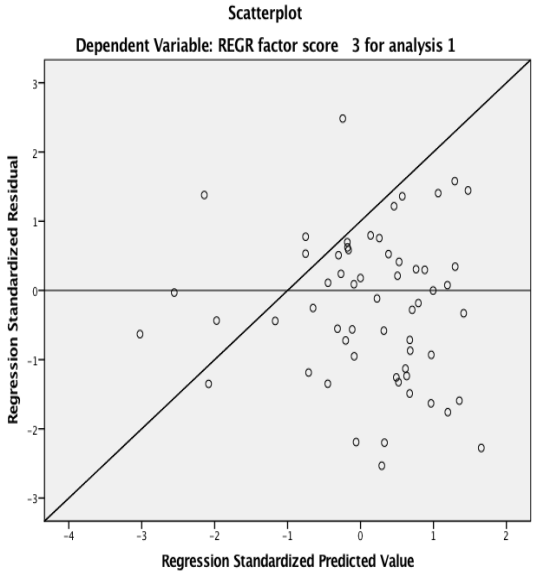


Figure E-4

2.2) Research questions

Furthermore, research questions had been set up to establish the goal of the multiple regression analysis.

RQ1:

How well do the measures of seven independent variables / items predict perceived "Procurement costs by the SCP"? How much variance in perceived "" by the SCP" can be explained by scores on these 7 scales?

RQ2:

Which is the best predictor of "Demand share, Reputation, Information asymmetry, Resource dependence diminishing", access to external power by the SCP?"

Towards exploring these two questions, a standard multiple regressions has been presented. In this model have been put variables / items which have been uncovered with the factor analysis of paragraph 3.8. Consequently, for the procedure of conducting this analysis is followed of Pallant (Pallant, 2010, pp. 153-162).

2.3) Evaluating the model

The third step in the multiple regression procedure of Pallant (Pallant, 2010, pp. 160-161) starts with analysing the Model Summary viewed in Table E-4The R Square and the Adjusted R Square presented a high value of 0.807 and 0.781 explains 80.7 and 78.1 per cent of the variance in perceived "Procurement Costs (internal) by the SCP". Tabachnick and Fidell (Tabachnick & Fidell, 2006), explain this high value to a small sample. On the other hand other statisticians (Berenson & Levine, 1996; Bierman et al., 1991, pp. 66-69;713-780) are debating about how high should R-squared be. In this study the objective of this analysis main goal is to determine which predictors are statistically significant and how changes in the predictors relate to changes in the response variable, so R-squared is less irrelevant (Berenson & Levine, 1996; Green & Salkind, 2014).

However the regression equation with all sixteen strength predictors was significantly related to the "Procurement Costs (internal) by the SCP" index , R2 =0.807 adjusted 0.781.

Table E-4

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,898[a]	,807	,781	,40212462

a. Predictors: (Constant), SCPRDT3, SCPRDT9, SCPRDT2, SCPRDT8, SCPRDT10, SCPRDT6, SCPRDT4
b. Dependent Variable: FAC3_1

The ANOVA in Table E-5 indicates that the model as a whole is significant Sig.= .000. Also, that the difference between the variables is 80.7 per cent (34,488/42,734 * 100%) of de total variation. De power of the causality is strong between the depended and independent variables.

Table E-5

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	34,488	7	4,927	30,468	,000[b]
	Residual	8,247	51	,162		
	Total	42,734	58			

a. Dependent Variable: FAC3_1
b. Predictors: (Constant), SCPRDT3, SCPRDT9, SCPRDT2, SCPRDT8, SCPRDT10, SCPRDT6, SCPRDT4

2.4) Evaluating each of the independent variables

Afresh primarily has checked the value of the variables in Table E-6 the column marked sig.. This value must be less than 0.05; formerly the variable is making a significant unique contribution to the prediction of the dependent variable.

The green shaded variables have significant unique contribution to the prediction of the dependent variable. Thereafter, interesting is comparing the contribution of each independent variable, wherefore the Beta of the shaded had been checked.

Table E-6

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-2,705	,222		-12,190	,000	-3,151	-2,260					
	SCPRDT8	,287	,056	,505	5,102	,000	,174	,400	,807	,581	,314	,387	2,584
	SCPRDT10	,126	,057	,216	2,204	,032	,011	,241	,739	,295	,136	,394	2,537
	SCPRDT9	,236	,067	,397	3,555	,001	,103	,370	,759	,446	,219	,304	3,294
	SCPRDT6	-,132	,061	-,239	-2,174	,034	-,253	-,010	,620	-,291	-,134	,313	3,199
	SCPRDT2	,078	,049	,151	1,587	,119	-,021	,177	,637	,217	,098	,421	2,377
	SCPRDT4	-,064	,072	-,101	-,893	,376	-,208	,080	,569	-,124	-,055	,296	3,383
	SCPRDT3	,052	,070	,082	,746	,459	-,088	,191	,595	,104	,046	,315	3,174

a. Dependent Variable: FAC3_1

2.5) Recap

The highest predictor of "by the SCP" is SCPRDT8, $b^* = 0.505$ (Question 2). Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity were noticed. After entry of the seven variables at the second step, the total variance explained by the model as whole was 80.7 per cent, $F\ (7,51) = 30.47$, $p < .001$.

In the final model SCPRDT8 and SCPRDT9 have strength relation with the Factor 3, Demand share, Reputation, Information asymmetry, Resource dependence diminishing,

Access to external power by the SCP and are determined explainable in this latent variable.

SCPRDT8 (*b** 0.505, $p < .001$), *LAs have together more volume in the market by the SCP*, have been recognised by the LAs as the most significant value of the dimension ……. of the SCP to perform the procurement function.

SCPRDT9 (*b** 0.397, $p = .05$), *LAs government hitchhike with collaborative brand of the SCP*, have been seen by the Las as the second most significant value of the dimension "Demand share, Reputation, Information asymmetry, Resource dependence diminishing" produced by the SCP.

3) Linear regression "Goal synchronisation"

A multiple regression analysis was conducted to evaluate how well the strength measures predicted Goal synchronisation. Factor 4: "Goal synchronisation" has been put in the multiple regression model for the dependent variable. Variables have been moved as independent variables to the model. The description of the values / items are viewed below:

- SCPAT1 LAs have agreements procurement goals and strategies in the SCP
- SCPAT2 LAs have agreements about how executing Joint procurement groups in the SCP

3.1) Checking the assumptions

The normal probability plot of the regression standardised residual and the scatterplot were coexisted examined. The P-P plot in figure 3-8 shows points in a judiciously straight diagonal line from bottom left tot top right. This implies no major deviations form normality. The homoscedasticity requires that the variation around the line of the regression is constant for all values of X. Also the scatterplot in figure 3-9, showed no systematic pattern to your residuals values. Correspondingly the statement of Tabachnick and Fidell (Tabachnick & Fidell, 2006), the scatterplot shows that the values contents minimal of outlying residuals of more than 3.3 or less than -3.3 and are reflected well on the zero axe.

For controlling the multicollinearity the VIF, variance inflationary factor, and Tolerance has been checked for each explanatory variable. If a set of explanatory variables are

uncorrelated, then the VIF will we be equal to 1. If the set were highly intercorrelated, then VIF might even exceed 10. Marquardt (1980) suggests that if VIF is > 10, there is too much correlation between variable and the other explanatory variables. However Snee (1973) suggest a more conservative criterion that would indicate alternatives to least squares regression if the maximum VIF, were to exceed 5. Examining the data of Factor 1, Resource sharing, noted of table ….., the VIF (2 < VIF < 6). As well of conservative as the progressive stream, the VIF, the conclusion has been made that there is no reason to suspect any multicollinearity for variable Resource Sharing. The values have shown in table 3-55, grey shaded.

The parameter tolerance has been checked on the value > 0.10 if not this indicates on high multiple correlations with other variables, suggesting the possibility on multicollinearity. The tolerance in table… is > 0.10. The values have shown in table 3-55, grey shaded.

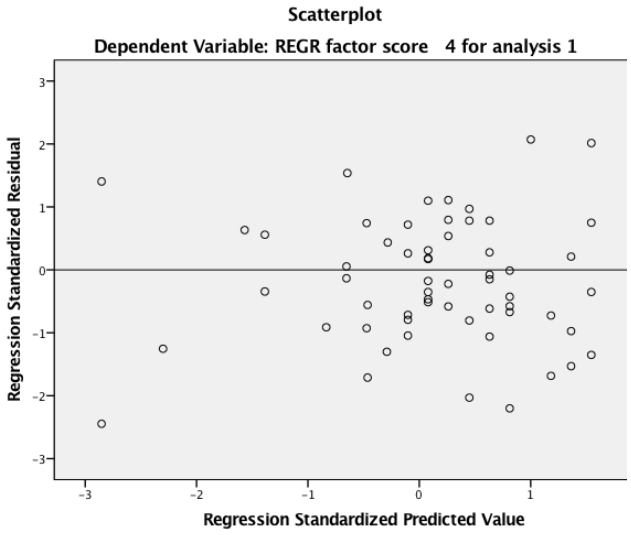


Figure E-5

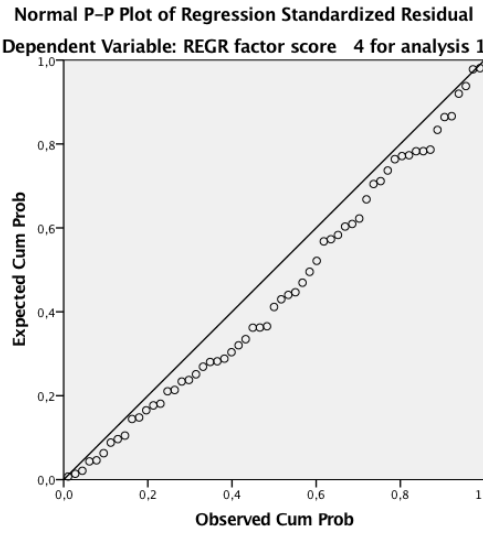


Figure E-6

3.2) Research questions

Furthermore, research questions have been set up to establish the goal of the multiple regression analysis.

Research Question 1:

How well do the measures of two independent variables / items predict perceived “Goal Synchronisation by the SCP”? How much variance in perceived “” by the SCP” can be explained by scores on these 2 scales?

Research Question2:

Which is the best predictor of the factor dimension “Goal Synchronisation”?

Concerning exploring these two subjects, a standard multiple regressions have been be presented. In this model have been put variables / items which have been examined with the factor analysis of paragraph 3.8…….Consequently, the procedure for conducting this analysis is followed of Pallant (Pallant, 2010, pp. 153-162).

3.3) Evaluating the model

Over the third step in the multiple regression procedure of Pallant (Pallant, 2010, pp. 160-161) starts with analysing of the Model Summary viewed in Table E-7 The R Square and the Adjusted R Square presented a high value of 0.724 and 0.714 explains 72.4 and 71.4 per cent of the variance in perceived “Procurement Costs (internal) by the SCP”.

Table E-7

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,851[a]	,724	,714	,52479011

a. Predictors: (Constant), SCPAT1, SCPAT2
b. Dependent Variable: FAC4_1

In this study the objective of this analysis main goal is to determine which predictors are statistically significant and how changes in the predictors relate to changes in the response variable, so R-squared is less irrelevant (Berenson & Levine, 1996; Green & Salkind, 2014).

However, the regression equation with all sixteen strength predictors was significantly related to the “Goal Synchronisation” index, R2 =0.724 adjusted 0.714.

The ANOVA in Table E-8 indicates that the model as a whole is significant Sig.= .000. Also, that the difference between the variables is 72.3 per cent (40,479/55,902 * 100%) of the total variation. De power of the causality of Goal Synchronisation and the two independent variables is strong (Straub et al., 2004).

Table E-8

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	40,479	2	20,240	73,490	,000[b]
	Residual	15,423	56	,275		
	Total	55,902	58			

a. Dependent Variable: FAC4_1
b. Predictors: (Constant), SCPAT1, SCPAT2

3.4) Evaluating each of the independent variables

Primarily has been checked the value of the variables in the column marked Sig.. This value must be less than 0.05, than the variable is making a significant unique contribution to the prediction of the dependent variable, Goal Synchronisation.

The marked variables (Table E-9) have significant unique contribution to the prediction of the dependent variable. Thereafter, interesting is comparing the contribution of each independent variable, wherefore the Beta of the marked has been checked.

Table E-9

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients			95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-2,904	,257		-11,303	,000	-3,418	-2,389					
	SCPAT2	,461	,066	,662	6,955	,000	,328	,594	,831	,681	,488	,544	1,839
	SCPAT1	,151	,058	,250	2,624	,011	,036	,267	,697	,331	,184	,544	1,839

a. Dependent Variable: FAC4_1

3.5) Recap

Also for this factor dimension “Goal Synchronisation” multiple regression analysis was conduced to evaluate how well the strength measures predicted. Two variables were

making a significant unique contribution to the prediction of the "Goal Synchronisation" (Question 1).

The best predictor of "Goal Synchronisation" is SCPAT2, *b** = 0.662 (Question 2). Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity. After entry of the two variables at the second step, the total variance explained by the model as whole was 72.4 per cent, F (2,56) = 73.49, $p < .001$.

In the final model SCPATT2 and SCPAT1 have strength relation with the Factor 4, Goal Synchronisation and are determined explainable in this latent variable.

SCPAT2 (*b** 0.662, $p < .001$), *LAs have agreements about how executing Joint procurement groups in the SCP*, have been recognised by the LAs as the most significant value of the dimension Goal Synchronisation of the SCP to perform the procurement function.

SCPAT1 (*b** 0.250, $p < .001$), *SCPAT1 LAs have agreements procurement goals and strategies in the SCP*, have been seen by the LAs as the second most significant value of the dimension Goal Synchronisation produced by the SCP.

4) Linear regression "Value by the SCP"

Factor 5: 'Value by the SCP' has been put in the multiple regression model for the dependent variable. Variables SCPCCT1, SCPCCT2, SCPCCT6, SCPTC8, have been moved as independent variables to the model. The description of the values / items are viewed below:

- SPCCCT1 LAs has quicker new and innovative product / services by the SCP
- SPCCCT2 LAs has more flexibility and agility for demands ad hoc by the SCP
- SPCCCT6 LAs has more access for innovation in their products / services / works by outsourcing the procurement function by the SCP
- SCPTC8 LAs has shorter cycle time during execution of procurement procedures by the SCP

4.1) Research questions

"Value" by the SCP can be explained by the independent variables. Besides that, it provides indication of the relative contribution of each independent variable. This has been translated to several research questions.

Research question I:

How well do the measures of four independent variables / items predict perceived "Value by the SCP"?

How much variance in perceived "Value by the SCP", scores can explained on these four scales?

Research question II:

Which is the best predictor of "Value by the SCP"?

To explore these two questions, a standard multiple regression has been executed. In this model have been put variables / items which have been uncovered with the factor analysis of paragraph. The procedure for conducting this analysis is followed of Pallant (Pallant, 2010, pp. 153-162)

4.2) Checking the assumptions

Multiple regressions is one of the exacting of the statistical techniques (Berenson & Levine, 1996, pp. 714-785). Therefore the appropriated application is dependent on starting with analysis of a set of assumptions, which are necessary for regression and correlation analysis (Berenson & Levine, 1996; Pallant, 2010; Tabachnick & Fidell, 2006). The five major assumptions are normality, homoscedasticity, independence of errors, linearity and (no) multicollinearity.

For determining these assumptions, the data have been checked on outliers, normality, homoscedasticity, independence of residuals and linearity. The normal probability plot of the regression standardised residual and the scatterplot were investigated. The P-P plot in figure 3-10 shows points in a reasonably straight diagonal line form bottom left tot top right. This indicates no major deviations form normality. The homoscedasticity requires that the varation around the line of the regression be constant for all values of X.

Also the scatterplot in figure 3-11, showed no systematic pattern to your residuals values. Correspondingly the statement of Tabachnick and Fidell (Tabachnick & Fidell, 2006), the scatterplot shows that the values contents minimal of outlying residuals of more than 3.3 or less than -3.3 and parallel deviation.

For controlling the multicollinearity the VIF, variance inflationary factor, and Tolerance has been checked for each explanatory variable. If a set of explanatory variable are uncorrelated, then the VIF will we be equal to 1. If the set were highly intercorrelated, then VIF might even exceed 10. Marquardt (1980) suggests that if VIF is > 10, there is too much correlation between variable and the other explanatory variables. However Snee (1973) suggest a more conservative criterion that would suggest alternatives to least squares regression if the maximum VIF, were to exceed 5. Examining the data of Factor 1, Resource sharing, noted of table ….., the VIF (1.5 < VIF < 6). As well of conservative as the progressive stream, the VIF, the conclusion has been made that there is no reason to suspect any multicollinearity for variable Resource Sharing.

The parameter tolerance has been checked on the value > 0.10 if not this indicates on high multiple correlations wit other variables, suggesting the possibility on multicollinearity. The tolerance in table 3-58 is > 0.10.

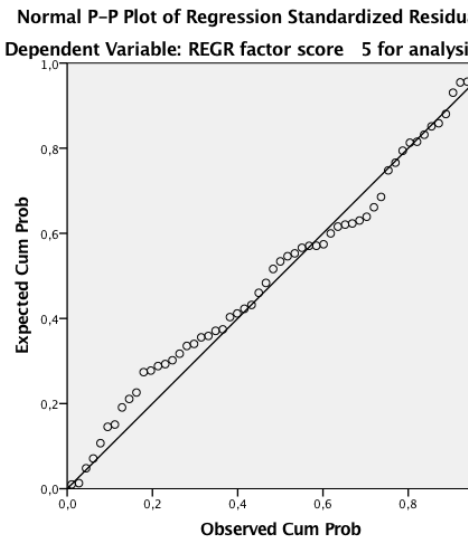


Figure E-7

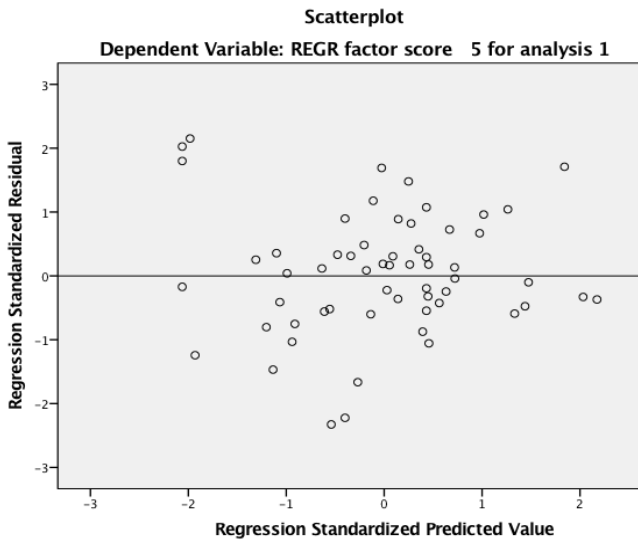


Figure E-8

4.3) Evaluating the model

The second step in the multiple regression procedure of Pallant (Pallant, 2010, pp. 160-161) starts with analysing of the Model Summary viewed in table 3-56 The R Square and the Adjusted R Square presented a high value of 0.764 and 0.746 explains 76.4 and 74.6 per cent of the variance in perceived "Value by the SCP". In this study the objective of this analysis main goal is to determine which predictors are statistically significant and how changes in the predictors relate to changes in the response variable, R-squared is less irrelevant (Berenson & Levine, 1996; Green & Salkind, 2014).
Nevertheless the regression equation (Table E-10) with all sixteen strength predictors was significantly related to the "Value by the SCP" index , R2 =0.764, adjusted 0.746.

Table E-10

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,874[a]	,764	,746	,50247421

a. Predictors: (Constant), SCPTC8, SCPCCT6, SCPCCT2, SCPCCT1
b. Dependent Variable: FAC5_1

In Table E-11 The statistical significance of the result has been checked. The model reaches statistical significance $p < .0005$. Besides this, the df is equal to the number of independents variables.

Table E-11

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	44,020	4	11,005	43,587	,000[b]
	Residual	13,634	54	,252		
	Total	57,654	58			

a. Dependent Variable: FAC5_1
b. Predictors: (Constant), SCPTC8, SCPCCT6, SCPCCT2, SCPCCT1

4.4) Evaluating each of the independent variables

Firstly has been checked the value of the variables in Table E-12 the column marked Sig.. This value must be less than 0.05, than the variable is making a significant unique contribution to the prediction of the dependent variable.

The marked variables have significant unique contribution to the prediction of the dependent variable. Thereafter, interesting is comparing the contribution of each

independent variable, wherefore the Beta of the marked has been checked.

Table E-12

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-2,631	,207		-12,729	,000	-3,045	-2,216					
	SCPCCT1	,251	,066	,370	3,816	,000	,119	,382	,759	,461	,253	,465	2,151
	SCPCCT6	,289	,055	,428	5,266	,000	,179	,400	,737	,582	,348	,663	1,508
	SCPCCT2	,069	,055	,117	1,272	,209	-,040	,179	,578	,171	,084	,521	1,919
	SCPTC8	,114	,056	,169	2,042	,046	,002	,227	,589	,268	,135	,637	1,569

a. Dependent Variable: FAC5_1

4.5) Recap

A multiple regression analysis was conduced to evaluate how well the strength measures predicted "Value by the SCP" level. Four variables were making a significant unique contribution to the prediction of the "Value by the SCP" (Question 1).

The best predictor of "Value by the SCP" is SCPCCT6, b^* = 0.428 0 (Question 2). Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity. After entry of the six variables at the second step, the total variance explained by the model as whole was 76.4 per cent, F (4,54) = 43.587, p < .001.

In the final model SCPCCT6 and SCPCCT1 have strength relation with the Factor 5, 'Value' are determined explainable in this latent variable.

SCPCCT6 (b^* 0.428, p < .001), *LAs has more access for innovation in their products / services / works by outsourcing the procurement function by the SPC* , have been recognised by the LAs as the most significant value of the dimension of the SCP to perform the procurement function.

SCPCCT1 (b^* 0.370, p < .001), *LAs has quicker new and innovative products / services by the SCP*, have been seen by the LAs as the second most significant value of the dimension Value produced by the SCP. SCPTC8, has been excluded because of the deeper determined in this latent variable.

5) Linear regression "Access to professional Public Procurement knowledge (internal) by the SCP"

Factor 6: 'Transparency of information' by the SCP has been put in the multiple regression model for the dependent variable. SCPAT6, SCPAT7 SCPAT8 variables have been moved as independent variables to the model. The description of the values / items are viewed below:

- SCPAT6 LAs make annual jointly procurement plans with the SCP
- SCPAT7 LAs, jointly controls and update periodical the procurement plans with the SCP
- SCPAT8 LAs jointly decides about exceptions and deviations about the jointly procurement plan

5.1) Research questions

For the last factor, multiple regression explains in this research how much of the variance in the dependent variable, Transparency of information by the SCP can be explained by the independent variables. Moreover, it provides indication of the relative contribution of each independent variable. This has been translated to several research questions.

Research question I:

How well do the measures of 3 independent variables / items predict perceived "Access to professional Public Procurement knowledge (internal) by the SCP"? How much variance in perceived "Transparency of information by the SCP" can be explained by scores on these 3 variables?

Research question II:

Which is the best predictor of "Transparency of information by the SCP"?

To explore this two questions, a standard multiple regression will be executed. In this model have been put variables / items which have been uncovered with the factor analysis of paragraph 3.8.

Again, the procedure for conducting this analysis is followed of Pallant (Pallant, 2010, pp. 153-162).

5.2) Checking the assumptions

Multiple regressions is one of the exacting of the statistical techniques (Berenson & Levine, 1996, pp. 714-785). Therefore the appropriated application is dependent on starting with analysis of a set of assumptions, which are necessary for regression and correlation analysis (Berenson & Levine, 1996; Pallant, 2010; Tabachnick & Fidell, 2006). The five major assumptions are normality, homoscedasticity, independence of errors, linearity and (no) multicollinearity.

For determining these assumptions, the data have been checked on outliers, normality, homoscedasticity, independence of residuals and linearity. The normal probability plot of the regression standardised residual and the scatterplot were investigated. The P-P plot in figure 3-12 shows points in a reasonably straight diagonal line from bottom left to top right. This indicates no major deviations form normality. The homoscedasticity requires that the variation around the line of the regression be constant for all values of X.

Also the scatterplot in figure 3-13, showed no systematic pattern to your residuals values. Correspondingly the statement of Tabachnick and Fidell (Tabachnick & Fidell, 2006), the scatterplot shows that the values contents minimal of outlying residuals of more than 3.3 or less than -3.3 and the values are parallel distributed.

For controlling the multicollinearity the VIF, variance inflationary factor, and Tolerance has been checked for each explanatory variable. If a set of explanatory variable are uncorrelated, then the VIF will we be equal to 1. If the set were highly intercorrelated, then VIF might even exceed 10. Marquardt (1980) suggests that if VIF is > 10, there is too much correlation between variable and the other explanatory variables. However Snee (1973) suggest a more conservative criterion that would emply alternatives to least squares regression if the maximum VIF, were to exceed 5. Examining the data of Factor 1, Resource sharing, noted of table 3-61, the VIF ($1.5 < VIF < 6$). As well of conservative as the progressive stream, the VIF, the conclusion has been made that there is no reason to suspect any multicollinearity for variable Resource Sharing.

The parameter tolerance has been checked on the value > 0.10 if not this indicates on high multiple correlations wit other variables, suggesting the possibility on multicollinearity. The tolerance in table 3-61 is > 0.10.

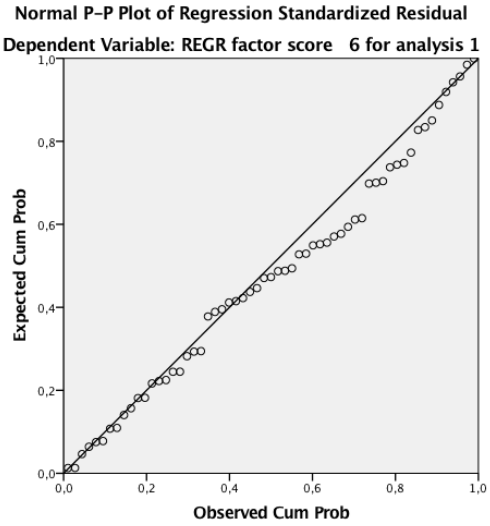


Figure E-9

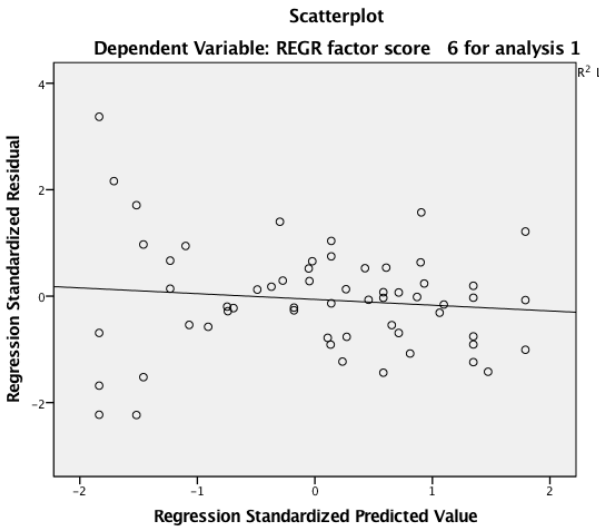


Figure E-10

5.3) Evaluating the model

The second step in the multiple regression procedure of Pallant (Pallant, 2010, pp. 160-161) starts with analysing of the Model Summary viewed in Table E-15. The R Square and the Adjusted R Square presented a high value of 0.752 and 0.739 explains 75.2 and 73.9 per cent of the variance in perceived "Transparency of information by the SCP".

Table E-13

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,867[a]	,752	,739	,52551010

a. Predictors: (Constant), SCPAT6, SCPAT8, SCPAT7
b. Dependent Variable: FAC6_1

In Table E-14The statistical significance of the result has been checked. The model reaches statistical significance p< .0005. Besides this, the $_{df}$ is equal to the number of independents variables.

Table E-14

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46,179	3	15,393	55,739	,000[b]
	Residual	15,189	55	,276		
	Total	61,368	58			

a. Dependent Variable: FAC6_1
b. Predictors: (Constant), SCPAT6, SCPAT8, SCPAT7

5.4) Evaluating each of the independent variables

Firstly has been checked the value of the variables in the column marked sig.. This value must be less than 0.05, than the variable is making a significant unique contribution to the prediction of the dependent variable.

The marked variables (Table E-15) have significant unique contribution to the prediction of the dependent variable. Thereafter, interesting is comparing the contribution of each independent variable, wherefore the Beta of the marked has been checked.

Table E-15

Coefficients[a]

	Unstandardized Coefficients		Standardized Coefficients			95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
Model	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	-2,247	,191		-11,783	,000	-2,629	-1,865					
SCPAT8	,283	,047	,521	6,006	,000	,189	,378	,792	,629	,403	,597	1,674
SCPAT7	,112	,061	,191	1,826	,073	-,011	,235	,720	,239	,123	,413	2,421
SCPAT6	,144	,048	,290	3,021	,004	,049	,240	,698	,377	,203	,489	2,044

a. Dependent Variable: FAC6_1

5.5) Recap

A multiple regression analysis was conduced to evaluate how well the strength measures predicted "Access to professional Public Procurement knowledge (internal) by the SCP" level. Two variables were variable is making a significant unique contribution to the prediction of the "Transparency of information by the SCP" (Question 1).

The best predictor of "Transparency of information by the SCP" is SCPAT8, $b^* = 0.521$ (Question 2). Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity. After entry

of the three variables at the second step, the total variance explained by the model as whole was 75.2 per cent, F (3,55) = 55.74, p < .001.

In the final model SCPAT8 and SCPAT6 have strength relation with the Factor 1, Resource sharing and are determined explainable in this latent variable.
SCPAT8 (b* 0.521, p < .001), *LAs jointly decides about exceptions and deviations about the jointly procurement plan*, have been recognised by the LAs as the most significant value of the dimension Transparency of information of the SCP to perform the procurement function.
SCPAT6 (b* 0.290, p < .001), *LAs make annual jointly procurement plans with the SCP* , have been seen by the LAs as the second most significant value of the dimension Transparency of Information produced by the SCP.

SCPAT7 (b* 0.191, p = .073), *LAs, jointly controls and update periodical the procurement plans with the SCP* has been excluding deeper determined in this latent variable, Factor 6, Transparency of Information.

Appendix XIV. MANOVA Analyses

"Resource sharing and business capabilities"

- *SCPRBT2: LAs have access to dedicate personnel to manage the collaborative process by the SCP*
- *SCPRBT1: LAs use cross-organisational teams for process design and improvement in procurement projects by the SCP*

D1Profession: The 'profession' group was not significantly different from each other.
D2Function: 'The organisational' group was not significantly different from each other.
D3Frequence: The 'frequency' group was not significantly different from each other.
Although variable / item statically was not significant, the actual difference SCPRBT2 was not very small, almost more than 2 scale points (3,000 versus 4,875)
D4Inhab: The "Inhab group was significantly different from each other. Wilk's Lambada value, showed in Table F-1 of .789 with a significance value 0.017. This is less than 0.05; therefore there is a statistically significant difference between the number of inhabitants of the LAs and the contribution of resource sharing by the SCP for the LA.

Table F-1

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	,900	452,124[b]	2,000	101,000	,000	,900
	Wilks' Lambda	,100	452,124[b]	2,000	101,000	,000	,900
	Hotelling's Trace	8,953	452,124[b]	2,000	101,000	,000	,900
	Roy's Largest Root	8,953	452,124[b]	2,000	101,000	,000	,900
D4INHAB	Pillai's Trace	,222	2,122	12,000	204,000	,017	,111
	Wilks' Lambda	,789	2,116[b]	12,000	202,000	,017	,112
	Hotelling's Trace	,253	2,110	12,000	200,000	,018	,112
	Roy's Largest Root	,172	2,923[c]	6,000	102,000	,011	,147

a. Design: Intercept + D4INHAB
b. Exact statistic
c. The statistic is an upper bound on F that yields a lower bound on the significance level.

"Cost Reduction by the SCP"

SCPTC6: SCP leads to lower costs of consulting legal external expertise

SCPTC3: Reducing of procurement management costs to manage the procurement function

D1Profession: The ‘profession’ group was not significantly different from each other.
D2Function: The ‘function’ group was not significantly different from each other
D3Frequence: The ‘Frequence’ group was significantly different from each other. Wilk’s Lambada valu, showed in Table F-2of .844 with a significance value 0.029. This is less than 0.05; therefore there is a statistically significant difference between the frequency how often the respondents are dealing with procurement of the LAs and the contribution of cost reduction by the SCP for the LA

Table F-2

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	,908	405,999[b]	2,000	82,000	,000	,908
	Wilks' Lambda	,092	405,999[b]	2,000	82,000	,000	,908
	Hotelling's Trace	9,902	405,999[b]	2,000	82,000	,000	,908
	Roy's Largest Root	9,902	405,999[b]	2,000	82,000	,000	,908
D3Frequence	Pillai's Trace	,157	2,360	6,000	166,000	,033	,079
	Wilks' Lambda	,844	2,422[b]	6,000	164,000	,029	,081
	Hotelling's Trace	,184	2,482	6,000	162,000	,025	,084
	Roy's Largest Root	,177	4,898[c]	3,000	83,000	,003	,150

a. Design: Intercept + D3Frequence
b. Exact statistic
c. The statistic is an upper bound on F that yields a lower bound on the significance level.

D4Inhab: The ‘inhabitants’ group were not significantly different from each other

“Uncertainty”

SCPRDT8: LAs have together more volume in the market by the SCP,
SCPRDT9: LAs government hitchhike with collaborative brand of the SCP,
D1Profession: The ‘profession’ group was not significantly different from each other.
D2Function: The ‘function’ group was not significantly different from each other.
D3Frequence: The ‘frequence’ group was not significantly different from each other.
D4Inhab: The ‘inhabitants’ group was not significantly different from each other.

“Coordination mechanism”

SCPAT2 LAs have agreements about how executing Joint procurement groups in the SCP
SCPAT1 LAs have agreements procurement goals and strategies in the SCP
D1Profession: The ‘profession’ group was not significantly different from each other.

D2Function: The ‘function’ group was not significantly different from each other.
D3Frequence: The ‘frequence’ group was not significantly different from each other.
D4Inhab: The ‘inhabitants’ group was not significantly different from each other.

“Agility & flexibility”

SCPCCT6 LAs has more access for innovation in their products / services / works by outsourcing the procurement function by the SPC

SCPCCT1 LAs has quicker new and innovative products / services by the SCP.

D1Profession: The ‘profession’ group was not significantly different from each other.
D2Function: The ‘function’ group was not significantly different from each other.
D3Frequence: The ‘frequence’ group was not significantly different from each other.
D4Inhab: The ‘inhab’ group was not significantly different from each other.

“Control of information”

SCPAT8 LAs jointly decides about exceptions and deviations about the jointly procurement plan

SCPAT6 LAs make annual jointly procurement plans with the SCP

D1Profession: The profession group was not significantly different from each other.
D2Function: The profession group was not significantly different from each other
D3Frequence: The profession group was not significantly different from each other
D4Inhab: The ‘Inhab’ group was significantly different from each other. Wilk’s Lambada valu, showed in Table F-3of .714 with a significance value 0.010. This is less than 0.05; therefore there is a statistically significant difference between the number of inhabitants of LAs and the contribution of transparency of information by the SCP for the LA.

Table F-3

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	,786	137,879[b]	2,000	75,000	,000	,786
	Wilks' Lambda	,214	137,879[b]	2,000	75,000	,000	,786
	Hotelling's Trace	3,677	137,879[b]	2,000	75,000	,000	,786
	Roy's Largest Root	3,677	137,879[b]	2,000	75,000	,000	,786
D4INHAB	Pillai's Trace	,305	2,278	12,000	152,000	,011	,152
	Wilks' Lambda	,714	2,294[b]	12,000	150,000	,010	,155
	Hotelling's Trace	,374	2,309	12,000	148,000	,010	,158
	Roy's Largest Root	,281	3,557[c]	6,000	76,000	,004	,219

a. Design: Intercept + D4INHAB
b. Exact statistic
c. The statistic is an upper bound on F that yields a lower bound on the significance level.